Pavlov Institute of Physiology of the Russian Academy of Sciences
Public Foundation named after academician I.P. Pavlov
Department of Physiological Sciences of the Russian Academy of Sciences
Federal Agency of Scientific Organizations
Committee on Science and Higher School of the Government of St. Petersburg

STRESS: PHYSIOLOGICAL EFFECTS, PATHOLOGICAL CONSEQUENCES AND APPROACHES TO THEIR PREVENTION

(Dedicated to the memory of Professor A.A. Filaretov)

All-Russian Symposium with International Participation
St. Petersburg
October 10–13, 2017

PROGRAM

SAINT-PETERSBURG
2017

DEAR COLLEAGUES, PARTICIPANTS AND GUESTS OF THE SYMPOSIUM!

We are pleased to welcome you to the symposium "Stress: physiological effects, pathological consequences and approaches to their prevention" at the largest physiological institute in our country, Pavlov Institute of Physiology of the Russian Academy of Sciences.

The symposium is dedicated to the memory of Professor Anatoly Arkadyevich Filaretov, who in 2017 would have turned 80 years old. A.A. Filaretov is an outstanding specialist in the field of neuroendocrinology, the author of numerous articles and 4 monographs devoted to the mechanisms of regulation and patterns of functioning of the key hormonal stress axis – the hypothalamic-pituitary-adrenocortical system.

The symposium is devoted to the problem of stress, the importance of the research study of which is difficult to overestimate. "Stress in health and disease is medically, sociologically, and philosophically the most meaningful subject for humanity" as prophetically wrote the founder of the conception of stress Canadian scientist Hans Selye. The relevance and understanding of the importance of stress for the human society is supported also by the fact that the Physiological Society (UK) announced the topic "Making Sense of Stress 2017" as its key scientific topic in 2017. Despite the fact that the symposium is declared as All-Russian Symposium with International Participation, it is international by its nature, as it is evidenced in its program. The former PhD students of Hans Selye, professors from USA Yvette Taché and Sandor Szabo will participate in the symposium.

We look forward to interesting and fruitful discussions and wish to all participants a pleasant stay both in our institute and in our wonderful city Saint-Petersburg.

THE ORGANIZING COMMITTEE

ORGANIZERS OF THE SYMPOSIUM

Pavlov Institute of Physiology of the Russian Academy of Sciences
Public Foundation named after academician I.P. Pavlov
Department of Physiological Sciences of the Russian Academy of Sciences
Federal Agency of Scientific Organizations
Committee on Science and Higher School of the Government of St. Petersburg

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E.A. Saveleva
Ph.D. E.P. Vovenko
Ph.D. N.I. Iarushkina
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Corresponding Member of RAS L.P. Filaretova

Committee members:

Corresponding Member of RAS N.N. Dygalo
Prof. D. Chen (Norway)
Prof. S. Szabo (USA)
Prof. Y. Taché (USA)

All-Russian Symposium with International Participation

«STRESS: PHYSIOLOGICAL EFFECTS, PATHOLOGICAL CONSEQUENCES AND APPROACHES TO THEIR PREVENTION»

(Dedicated to the memory of Professor A.A. Filaretov)

October 10–13, 2017

Pavlov Institute of Physiology RAS

6 Makarova naberezhnaya, 199034, St. Petersburg Russia

October 12, 2017 – Seminar

The Norwegian University Center in St. Petersburg

3 Kaluzhsky Pereulok, 193015, St. Petersburg Russia

In the program of the symposium:

– **Scientific sessions 1–4** (October 10 - October 13).

– **Round table 1 «Challenges and Opportunities in Research on Stress in the 21st Century»** (October 10).

The disciples of Hans Selye prof. S. Szabo and prof. Y. Taché will discuss together with participants key issues of research on the stress problem in the 21st century in a comparative perspective with the issues that were tackled in this field in the 20th century and share their experience under the guidance of their teacher Hans Selye at the University of Montreal.

– **Round table 2 «Laboratory Animals as Models of Physiological and Translational Research in the Post-Genomic Era»** (October 11).

Head of the resource center of the FIC of the Institute of Cytology and Genetics of the SB RAS prof. M.P. Moshkin and co-chairman of the Round Table Dr.Sc. E.A. Rybnikova will discuss the use of animals for experimental research in physiology and translational medicine. Attention will be focused on the experience of the center.

– **Seminar «Physiological Mechanisms of Humans and Animals in the Processes of Adaptation to Environmental Changes»** (October 12).

Heads of the Seminar prof. D. Chen (Norway) and Corresponding Member of the RAS L.P. Filaretova (Russia) together with the participants will review the research results of the 16 Norwegian and Russian scientific works and discuss the possibilities of international Russian-Norwegian cooperation involving representatives from the Scandinavian countries.

– **Session of young scientists** (October 13).

The presentations will demonstrate the results of research on various aspects of stress which are successfully developed by young scientists and postgraduate students.

– **Poster sessions 1 and 2** (October 12-13).

The symposium program includes presentations from leading experts in the field of stress from 15 countries: USA, Germany, France, Norway, Japan, China, Korea, India, Egypt, Hungary, Croatia, Slovakia, Kazakhstan, Moldova, Russia. There will be also presentations of Russian participants from 8 subjects of the Russian Federation will be presented – St. Petersburg, Moscow, Novosibirsk, Volgograd, Voronezh, Kurgan, Simferopol, Sochi.

PROGRAM OVERVIEW BY SESSION

Registration of the participants:
Pavlov Institute of Physiology RAS
October 9, 14:00 – 17:00
October 10, 9:00 – 10:00

Excursion to the Pavlov's Memorial museum
October 9, 15:00
from Pavlov Institute of Physiology RAS

<table>
<tr><th>October 10</th><th>October 11</th><th colspan="2">October 12</th><th>October 13</th></tr>
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<tr><td>10:00–13:00
Opening the Symposium. Greetings from guests

Scientific session 1</td><td>10:00–13:00
Scientific session 2</td><td rowspan="2">10:00–13:00
Seminar:**
«Physiological Mechanisms of Humans and Animals in the Processes of Adaptation to Environmental Changes»</td><td>10:00–12:00
Scientific session 3</td><td rowspan="2">10:00–13:00
Session of young scientists</td></tr>
<tr><td></td><td></td><td>12:00–13:00
Poster session 1</td></tr>
<tr><td>13:00–14:00
Break</td><td>13:00–14:00
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<tr><td>14:00–17:00
Scientific session 1
(continued)</td><td>14:00–17:00
Scientific session 2
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Seminar**
(continued)</td><td rowspan="2">14:00–18:00
Scientific session 3
(continued)</td><td>14:00–15:00
Poster session 2</td></tr>
<tr><td>17:00–20:00
Round table 1*: «Challenges and Opportunities in Research on Stress in the 21st Century»</td><td>17:00–18:00
Round table 2: «Laboratory Animals as Models of Physiological and Translational Research in the Post-Genomic Era»</td><td>15:00–18:00
Scientific session 4</td></tr>
<tr><td colspan="3"></td><td>Closing of the Symposium</td></tr>
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* *Entrance by invitation.*
** *Entrance by invitation. The working language of the seminar is English. Venue of the seminar: Norwegian University Center in St. Petersburg, 3 Kaluzhsky pereulok.*

October 10, 2017 Pavlov Institute of Physiology RAS (St. Petersburg, 6 Makarova nab.)	
Scientific session 1 (10:00–13:00) ***Chairpersons:*** *Filaretova L.P., Szabo S., Taché Y.*	
Opening of the Symposium. Greetings from guests	
Filaretova L.P. *(Pavlov Institute of Physiology, Russian Academy of Sciences St. Petersburg)* The scientific heritage of professor A.A. Filaretov	20 min
Szabo S. *(Departments of Pathology and Pharmacology, School of Medicine, University of California, Irvine, CA, USA)* The 80 years of stress research after discovery of Hans Selye	25 min
Taché Y. *(CURE: Digestive Diseases Research Center and Center for Neurobiology of Stress, Digestive Diseases Division, David Geffen School of Medicine at UCLA and VA Greater Los Angeles Healthcare System, Los Angeles, California, USA)* The CRF signaling in the brain and the gut: disconnect between its role in stress-related alterations of the brain-gut axis and translational application	25 min
Break 15 min	
Markel A.L. *(Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk State University; Novosibirsk)* Genes and stress	25 min
Shelepin Yu.E., Logunova E.V., Pronin S.V. *(Pavlov Institute of Physiology, Russian Academy of Sciences, Saint-Petersburg State University, ITMO University; St. Petersburg)* Visual stress	20 min
Chernigovskaya T.V., Parin S.B. *(Saint-Petersburg State University, St. Petersburg, Lobachevsky State University of Nizhni Novgorod, Nizhni Novgorod)* Cognitive load during rapid code switching (simultaneous translation): does the stress help?	25 min
Break 13:00 – 14:00	

October 10, 2017 Pavlov Institute of Physiology RAS (St. Petersburg, 6 Makarova nab.)	
Scientific session 1 (continued) (14:00–17:00) ***Chairpersons:*** *Saavedra J.M., Gyires K., Bonaz B.*	
Saavedra J.M. *(Department of Pharmacology and Physiology, Georgetown University Medical Center, Washington, USA)* The role of Angiotensin *II* receptors in the prevention of the pathological consequences of stress	25 min
Bonaz B. *(Hepato-Gastroenterology Service, University Hospital, F-38000, Grenoble Alpes; University Grenoble Alpes, Grenoble Institute of Neurosciences, GIN, Inserm, U1216, F-38000 Grenoble; France)* Stress in the brain-gut axis	25 min
Gyires K. *(Department of Pharmacology and Pharmacotherapy, Faculty of Medicine, Semmelweis University, Budapest, Hungary)* Brain-gut axis: role of opioids in gastric mucosal integrity	25 min
Break 15 min	
Hahm K.B. *(Digestive Disease Center CHA University Bundang Medical Center and CHA Cancer Prevention Research Center, Seongnam, Korea)* Mesenchymal stem cells as reliever of *Helicobacter pylori*-associated stress in stomach	25 min
Sikiric P. *(Department of Pharmacology, Medical Faculty, University of Zagreb, Croatia)* Stress in gastrointestinal tract and stable gastric pentadecapeptide BPC 157. Finally, do we have a solution?	25 min
Goncharova N.D. *(Research Institute of Medical Primatology, Sochi)* Prospects for using of nonhuman primates, which differ in adaptive behavior, to study the individual features in stress responses of adaptive systems, possible pathological consequences and ways to their prevention	20 min
Discussion	
Round table 1 (17:00–20:00) «Challenges and Opportunities in Research on Stress in the 21st Century» ***Chairpersons:*** *Szabo S., Taché Y., Filaretova L.P.*	

October 11, 2017 Pavlov Institute of Physiology RAS (St. Petersburg, 6 Makarova nab.)	
Scientific session 2 (10:00–13:00) ***Chairpersons:*** *Jezova D., Dygalo N.N., Zelena D.*	
Jezova D., Hlavacova N., Segeda V., Izakova L. *(Laboratory of Pharmacological Neuroendocrinology, Institute of Experimental Endocrinology, Biomedical Research Center, Slovak Academy of Sciences and Department of Psychiatry, Faculty of Medicine, Comenius University and University Hospital, Bratislava, Slovakia)* Stress hormone aldosterone and major depressive disorder	25 min
Zelena D., Fodor A., Varga J., Balázsfi D. *(Hungarian Academy of Sciences, Institute of Experimental Medicine, Budapest; Hungary; Centre for Neuroscience, Szentágothai Research Centre, Institute of Physiology, Medical School, University of Pécs, Pécs; Hungary)* Sex-dependent role of vasopressin in stress and related disorders: studies in spontaneous mutant Brattleboro rat	20 min
Kudryavtseva N.N. *(Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk)* Neurobiological consequences of chronic social defeat stress: from behavior to gene	20 min
Zhukov D.A. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Active behavior strategy – a risk factor of learned helplessness as a result of uncontrolled stress	20 min
Break 15 min	
Helyes H., Scheich B., Csekő K., Kormos V., László K., Borbély E., Hajna Z., Tékus V., Bölcskei K., Ádori C., Csernus V., Pintér E., Szolcsányi J., Ábrahám I., Gaszner B. *(Departments of Pharmacology & Pharmacotherapy, Physiology, Anatomy, Medical School; János Szentágothai Research Centre & Centre for Neuroscience; Chronic Pain Research Group, Molecular Neuroendocrinology Research Group, Hungarian Academy of Sciences Hungarian Brain Research Program B, University of Pécs, Pécs, Hungary Department of Neuroscience, Karolinska Institutet, Stockholm, Sweden)* Somatostatin receptor subtype 4 (sst_4) is an important regulator of stress and depression-like behaviours: *in vivo* evidence obtained with gene-deficient mice and selective agonists	20 min
Pinter E., Bolcskei K., Saghy E., Kriszta G., Acs P., Sipos E., Abraham H., Komoly S. *(Department of Pharmacology and Pharmacotherapy, Department of Neurology, Department of Medical Biology, University of Pécs, Hungary)* Regulatory role of TRPA1 channels in neurodegenerative disorders	20 min

October 11, 2017 Pavlov Institute of Physiology RAS (St. Petersburg, 6 Makarova nab.)	
Scientific session 2 (10:00–13:00) ***Chairpersons:*** *Jezova D., Dygalo N.N., Zelena D.*	
Chernigovskaya E.V., Nasluzova E.V., Kulikov A.A., Glazova M.V. *(Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg)* Mechanisms of development the neurodegenerative damages in the hippocampus during epileptogenesis	20 min
Hlavacova N., Solarikova P., Brezina I., Jezova D. *(Institute of Experimental Endocrinology, Biomedical Research Center, Slovak Academy of Sciences and Department of Psychology, Faculty of Arts, Comenius University, Bratislava, Slovakia)* Neuroendocrine response to a psychological stressor in patients with athopy	10 min
Discussion	
Break 13:00 – 14:00	

Scientific session 2 (continued) (14:00–17:00) ***Chairpersons:*** *Rybnikova E. A., Sengupta J., Ferdinandy P.*	
Moshkin M.P. *(Institute of Cytology and Genetics Siberian Branch of the Russian Academy of Sciences, Novosibirsk)* A nanoparticulate ride from nose into the brain: tracing and hijacking of neuronal functions	25 min
Ferdinandy P. *(Semmelweis University, Budapest; Pharmahungary Group, Szeged; Hungary)* Need for novel drug targets for cardioprotection: unbiased omics approach and comorbidity models	25 min
Rybnikova E. A., Vetrovoy O. V., Baranova K. A. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* HIF-1 as a factor of cross adaptation to hypoxia and emotional stress	20 min
Break 15 min	
Sengupta J., Ghosh D. (*Department of Physiology, All India Institute of Medical Sciences, New Dehli, India)* Stress and embryo implantation	25 min

Scientific session 2 (continued) (14:00–17:00) ***Chairpersons:*** *Rybnikova E. A., Sengupta J., Ferdinandy P.*	
Ghosh D., Bhat M.A., Anupa G., Sengupta J. (*Department of Physiology, All India Institute of Medical Sciences, New Dehli, India)* Microenvironmental stress in peritoneum and endometriosis	25 min
Lopatina E.V. *(Almazov National Medical Research Centre, Pavlov Institute of Physiology, Russian Academy of Sciences, Pavlov First Saint Petersburg State Medical University; St. Petersburg)* The physiological role of the endogenous ouabain: new hormone of the stress	20 min
Discussion	
Round table 2 (17:00–18:00) «Laboratory Animals as Models of Physiological and Translational Research in the Post-Genomic Era» ***Chairpersons:*** *Moshkin M.P., Rybnikova E.A.*	

October 12, 2017 The Norwegian University Center in St. Petersburg, (3 Kaluzhskiy pereulok, 193015 St. Petersburg, Russia)	
Seminar **«Physiological Mechanisms of Humans and Animals in the Processes of Adaptation to Environmental Changes»** ***Chairpersons:*** *Chen D., Filaretova L.P.* **(10:00–18:00)**	
Chen D. *(Department of Clinical and Molecular Medicine, Norwegian University of Science and Technology, Trondheim, Norway)* New potential approaches for treatments of obesity and diabetes	30 min
Gudbrandsen O.A. *(Department of Clinical Medicine, University of Bergen, Bergen, Norway)* Dietary proteins and effects on obesity and comorbidities	15 min
Zhao C.-M. *(Department of Clinical and Molecular Medicine, Norwegian University of Science and Technology, Trondheim, Norway)* Nerve-cancer crosstalk: new concept and potential therapeutic target	30 min
Bazhan N.M. Baklanov A.V., Piskunova Yu.V., Kazantseva A.Yu., Makarova E.N. *(Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk)* Studying mechanisms of metabolic changes associated with age in mice	20 min
Break 15 min	
Zolotarev V.A., Murovets V.O. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Heritable variations in sweet taste perception and metabolism. A pilot study	15 min
Filaretova L.P. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Stress, glucocorticoids and gastroprotection	15 min
Lyubashina O.A., Sivachenko I.B., Busygina I.I., Panteleev S.S. *(Pavlov Institute of Physiology, Russian Academy of Sciences; Valdman Institute of Pharmacology, First St. Petersburg Pavlov State Medical University; St. Petersburg)* Alterations in bulbar neuronal activity associated with visceral hypersensitivity and search of pharmacological options for their correction	15 min

October 12, 2017 The Norwegian University Center in St. Petersburg, (3 Kaluzhskiy pereulok, 193015 St. Petersburg, Russia)	
Wagner G. *(University of Tromsø, Tromsø, Norway)* Biological clocks in a changing world	30 min
Break 13:00–14:00	
Savvateeva-Popova E.V., Dyuzhikova N.A. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Stress and genome lability: drosophila and rat genetic models	15 min
Dygalo N.N., Menshanov P.N., Lanshakov D.A., Sukhareva E.V., Bannova A.V., Bulygina V.V., Shishkina G.T., Kalinina T.S. *(Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Functional Neurogenomics Laboratory, Novosibirsk State University, Novosibirsk)* Neonatal glucocorticoids and hypoxia affect development of the central stress-coping mechanisms	20 min
Semenov D.G., Baranova K.A., Belyakov A.V., Vetrovoy O.V., Gluschenko T.S., Zenko M.Yu., Sarieva K.V., Tyulkova E.I., Churilova A.V., Rybnikova E.A., Samoilov M.O. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Adaptive effects of moderate interrupted hypobaric hypoxia. Putative neuronal mechanisms from genome up to cognition	15 min
Harauzov A.K., Ivanova L.E., Podvigina D.N., Korzhanova Z.N., Varovin I.A. *(Pavlov Institute of physiology, Russian Academy of Sciences, St. Petersburg, Russia)* Behavioral and electrophysiological studies of the functional state of rhesus monkeys	15 min
Break 15 min	
Shestopalova L.B., Petropavlovskaya E.A., Semenova V.V., Nikitin N.I. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Adaptive behavioral responses and human brain potentials to spatial changes in auditory scene	15 min

October 12, 2017 The Norwegian University Center in St. Petersburg, (3 Kaluzhskiy pereulok, 193015 St. Petersburg, Russia)	
Bakaidov I.A. *(User of alternative communication and software developer for people with disabilities (with limited health opportunities), St. Petersburg)* From the basic speech research in Pavlov Institute of Physiology of the Russian Academy of Sciences to alternative communication	15 min
Krylov B.V. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* The role of slow sodium channels in the processes of pain relief	15 min
Iarushkina N.I. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Stress modulation of somatic pain sensitivity in rats	15 min
Break 15 min	
Discussion	

October 12, 2017 Pavlov Institute of Physiology RAS (St. Petersburg, 6 Makarova nab.)	
Scientific session 3 (10:00–12:00) ***Chairpersons:*** *Gromova L.V., Gruzdkov A.A., Sheptitskiy V.A.*	
Gromova L.V., Dmitrieva Yu.V., Grefner N.M., Alekseeva A.S., Gruzdkov A.A. *(Pavlov Institute of Physiology and Institute of Cytology, Russian Academy of Sciences; St. Petersburg)* Functional state of the small intestine under chronic stress	20 min
Sheptitskiy V.A., Cheban L.N., Bylich L.G., Vorontsova O.A., Mayka T.N. Silitrarova T.N. *(Institute of Physiology and Sanocreatology of the Academy of Sciences of Moldova, Chisinau, Taras Shevchenko Transnistria State University, Tiraspol, Moldova)* Peculiarities of glucose and fructose absorption in the small intestine under conditions of stressful effects of varying strength and duration	20 min
Smelysheva L.N., Kuznetsov A.P., Kotenko M.A. *(Kurgan State University, Kurgan)* Hydrolytic function of the stomach and pancreas with emotional stress	20 min
Sobol K.V., Korotkov S.M., Nesterov S.V. Nesterov V.P. *(Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg)* Influence of probiotic product application on autonomic cardiovascular regulation	15 min
Sokolova I.A., Krushinskiy A.L., Kuzenkov V.S., Shakhnazarov A.A., Koshelev V.B. *(Lomonosov State University, Moscow)* Sound stress leads to development of syndrome of increased blood viscosity in rats of Krushinskiy-Molodkina line who genetically predisposed to audiogenic epilepsy	15 min
Evstafyeva E.V., Slyusarenko A.E., Moskovchuk O.B., Moskovchuk K.M., Ovsyannikova N.M. *(Medical Academy named after S.I. Georgievsky, Vernadsky Crimean Federal University, Simferopol)* Adaptive response, immune status, heavy metals and stable organic pollutants content in biosubstrates of children and mothers on urbanized territory	15 min
Bashkatova V.G., Prast H. *(P.K. Anokhin Research Institute of Normal Physiology, Moscow; Department of Pharmacology and Toxicology, University of Innsbruck, Austria)* Oxidative stress in mechanisms of action of psychomotor stimulants amphetamine and caffeine	15 min

October 12, 2017 (12:00 – 13:00)
Poster session 1

Chairpersons: *Gromova L.V., Nikitina E.A., Zachepilo T.G.*

Arkhipova O.A., Smelysheva L.N., Kuznetsov A.P. *(Kurgan State University, Kurgan)*

Secretory function of the stomach and pancreas in conditions of physical stress

Bachu A.Ya., Sheptitskiy V.A., Listopadova L.A. *(Taras Shevchenko Transnistria State University,Tiraspol, Institute of Physiology and Sanocreatology of the Academy of Sciences of Moldova, Chisinau; Moldova)*

Individual adaptation program based on the combination of aerobic training with adaptogen

Bazarbaeva S.M., Dinmukhamedova A.S., Ayzman R.I. *(L.N. Gumilyov Eurasian National University, Astana, Kazakhstan; Novosibirsk State Pedagogical University)*

Assessment of stress and socio-psychological adaptation of Kazakh students

Berezovskaya E.S., Lupashko Yu.A. *(Institute of Physiology and Sanocreatology of the Academy of Sciences of Moldova, Nicolae Testemitanu State University of Medicine and Pharmacy; Chisinau, Moldova)*

Asthenic and emotional disorders in patients with chronic viral hepatitis

Bogdanova N.G., Alekseeva E.V., Nazarova G.A., Bashkatova V.G. *(P.K. Anokhin Research Institute of Normal Physiology, Moscow)*

Impact of prenatal stress caused by the introduction of caffeine on the behavior of rat pups in the postnatal period

Bulgakova O.S., Kuznetsova T.G *(North-Western State Medical University named after I.I. Mechnikov, Scientific and practical center «Psychosomatic normalization», Pavlov Institute of Physiology, Russian Academy of Sciences; St. Petersburg)*

Characteristics of some parameters of homeostasis in young people under psycho-emotional stress

Chokine V.K., Vrabie V.G., Terenti N.V., Chokine M.S., Tolstenko D.A. *(Institute of Physiology and Sanocreatology of the Academy of Sciences of Moldova, Chisinau, Moldova)*

Change in the content of free amino acids in blood plasma of rats in response to the influence of the gentle and excessive stress factors

Derkach K.V., Basova N.E., Shpakov A.O. *(Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg)*

Hypothalamic leptin system as a target for correction of obesity and other metabolic disorders

October 12, 2017 (12:00 – 13:00) Poster session 1
Chairpersons: *Gromova L.V., Nikitina E.A., Zachepilo T.G.*
Furduy F.I., Sheptitskiy V.A., Cheban L.N., Listopadova L.A. *(Institute of Physiology and Sanocreatology of the Academy of Sciences of Moldova, Chisinau, Taras Shevchenko Transnistria State University,Tiraspol; Moldova)* Physiologically reasonable approaches to prevention and correction of disorders of the digestive-transport functions of the small intestine caused by stress factors
Gorbachevskaya A.I. *(Pavlov Institute of Physiology, Russian Academy of Sciences, Saint-Petersburg)* Spatial organization of possible ways of serotonergic innervation of the basal ganglia by nuclei raphes
Grosu V.V., Grosu S.V. *(State University of Medicine and Pharmacy Nicolae Testemitanu, Chisinau, Moldova)* Physiological basis of interrelation between stress induced and regulatory mechanisms of autonomic nervous system in patients with arterial hypertension
Kovalenko I.L., Galyamina A.G., Smagin D.A. *(Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk)* Relationship of autism spectrum genes with the genes of the glutamatergic system in the hippocampus of male mice with disturbed social behavior
Mihaylenko V.A., Butkevich I.P., Otellin V.A. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Correction of normobaric hypoxia effects in the neonatal period on adaptive behavior of adult rats
Mihaylenko V.A., Butkevich I.P., Protasova A.V. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Prenatal influence of fluoxetine on stress responses and pain sensitivity in male rats in the prepubertal period of development
Novoselova N.Yu. *(Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg)* Stress-induced inversion of interhemispheric asymmetry of phospholipid content of rat brain as a neurochemical basis (and criterion) for the change of the functional dominance of the hemispheres under stress
Pritvorova A.V., Vyushina A.V., Semenova O.G. *(Pavlov Institute of Physiology, Russian Academy of Sciences, State Scientific-Research Institute of Applied Problems; St. Petersburg)* Impact of prenatal stress on the dynamics of oxidative modification of proteins after immobilization stress

October 12, 2017 (12:00 – 13:00) Poster session 1
Chairpersons: *Gromova L.V., Nikitina E.A., Zachepilo T.G.*
Romanova I.V., Mihrina A.L., Derkach K.V., Mihaylova E.V., Bondareva V.M., Shpakov A.O. *(Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, Saint-Petersburg State University; St. Petersburg)* Colocalization of components of leptin, melanocortin, serotonin and dopamine signal systems in the hypothalamus, the midbrain (RN and VTA) in rats indicates a functional interaction between these systems
Shiryaeva N.V., Pavlova M.B., Vaydo A.I. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Influence of prenatal stress on the content of RNA in the neurons of the brain of adult rats, contrasting in the level of excitability of the nervous system
Smelyisheva L.N., Kuznetsov A.P., Kaygorodtsev A.V., Arkhipova O.A., Zakharov E.V., Artenyan N.A. *(Kurgan State University, Kurgan)* Stress-induced indicators of gonadotropins and sex hormones
Tataeva R.K., Burumbaeva M.B. *(L.N. Gumilyov Eurasian National University, JSC Astana Medical University; Astana, Kazakhstan)* Features of professional stress of high school teachers
Zhukov D.A., Ogienko N.A., Vinogradova E.P. *(Pavlov Institute of Physiology, Russian Academy of Sciences, Saint-Petersburg State University; St. Petersburg)* Effects of oxytocin depend on the modality of stress and innate strategy of animal behavior
Break 13:00 – 14:00

October 12, 2017 Pavlov Institute of Physiology RAS (St. Petersburg, 6 Makarova nab.)	
Scientific session 3 (continued) (14:00 – 18:00) ***Chairpersons:*** *Nikitina E.A., Daev E.V., Romanova I.V.*	
Nikitina E.A., Zakharov G.A., Zhuravlev A.V., Medvedeva A.B., Gorokhova S.A., Ivanova P.N., Gerasimenko M.S., Shchegolev B.F., Savvateeva-Popova E.V. *(Pavlov Institute of Physiology, Russian Academy of Sciences, Herzen Russian Pedagogical University; St. Petersburg)* Stress: influence on cognitive and locomotor processes in *Drosophila melanogaster*	20 min
Daev E.V. *(Saint-Petersburg State University, Saint-Petersburg)* Disorder of cell divisions as a consequence of stress reaction in animals: an example of the house mouse (*Mus musculus* L.)	20 min
Zachepilo T.G., Shvetsov A.V., Lopatina N.G. *(Pavlov Institute of Physiology, Russian Academy of Sciences; St. Petersburg)* Effect of cold stress on histone H3K4 methylation in the long-term memory formation in the honeybee *Apis mellifera* L.	20 min
Klyueva N.Z., Rudenko E.D., Schegolev B.F. *(Pavlov Institute of Physiology, Russian Academy of Sciences, Almazov National Medical Research Centre; St. Petersburg)* Investigation of the role of the peptide part of parathyroid hypertensive factor (a possible β2-adrenoreceptor antagonist) in the pathogenesis of attention deficit hyperactivity disorder in children on an experimental model	20 min
Romanova I.V., Mikhrina A.L., Mikhailova E.V. *(Sechenov Institute of Evolutionary Physiology and Biochemistry Russian Academy of Sciences, St. Petersburg)* The role of endogenous antagonist of melanocortin receptors in the brain in the regulation of stress response	20 min
Break 15 min	
Bigday E.V., Samoilov V.O., Bezgacheva E.A. *(Pavlov Institute of Physiology, Russian Academy of Sciences; St. Petersburg)* Molecular-cellular mechanisms of adaptation of locomotion to non-muscle cells (by the example of olfactory cilia)	20 min
Furduy F.I., Chokine V.K., Glizhin A.G., Furduy V.F., Vrabie V.G., Georgiu Z.B. *(Institute of Physiology and Sanocreatology of the Academy of Sciences of Moldova, Chisinau, Moldova)* Psychosanocreatology, psychogenic stress and emotions	20 min

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Scientific session 3 (continued) (14:00 – 18:00) ***Chairpersons:*** *Nikitina E.A., Daev E.V., Romanova I.V.*	
Kuznetsova T.G., Golubeva I.Yu., Gorbacheva M.V. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Anti-stress role of self-regulation reactions. Phylogenetic aspect	20 min
Sotnikov O.S. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Stress and currents of axoplasm	20 min
Discussion	

October 13, 2017 Pavlov Institute of Physiology RAS (St. Petersburg, 6 Makarova nab.)	
Session of young scientists (10:00–13:00) ***Chairpersons:*** *Belyakov A.V., Marchuk O.E., Vetrovoy O.V.*	
Hamouda N., Matsumoto K., Amagase K., Kato S. *(Division of Pathological Sciences, Department of Pharmacology and Experimental Therapeutics, Kyoto Pharamceutical University, Kyoto, Japan)* Apoptosis, dysbiosis, and expression of inflammatory cytokines are sequential events in the occurrence of 5-fluorouracil-induced intestinal mucositis in mice	10 min
Belyakov A.V., Semenov D.G. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Effect of a moderate hypoxic stress on short-term memory of primates	10 min
Marchuck O.E., Saulskaya N.B. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Contextual fear generalization correlates with levels of serotonergic activation of the medial prefrontal cortex during fear learning	10 min
Galyamina A.G., Kovalenko I.L., Smagin D.A., Kudryavtseva N.N. *(Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk)* Pharmacological study of comorbidity of anxiety and depression in the development of mixed anxiety-depressive disorder	10 min
Gorbacheva E.L., Nikitina L.S. *(Sechenov Institute of Evolutionary Physiology and Biochemistry Russian Academy of Sciences, Saint-Petersburg State University; St. Petersburg)* Influence of sound stimulation on the activity of the hypothalamic-pituitary-adrenocortical system in Krushinsky-Molodkina rats predisposed to audiogenic epilepsy	10 min
Sudalina M.N., Komkova O.P., Filaretova L.P. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Gastroprotective effect of remote ischemic preconditioning: participation of glucocorticoids	10 min
Baranova K.A. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Influence of the remote ischemic pre- and postconditioning on the dynamics of corticosterone in rat blood plasma in the model of posttraumatic stress disorder	10 min
Break 15 min	

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Session of young scientists (10:00–13:00) ***Chairpersons:*** *Belyakov A.V., Marchuk O.E., Vetrovoy O.V.*	
Ivanova P.N., Nikitina E.A., Chalisova N.I. *(Herzen Russian Pedagogical University, Pavlov Institute of Physiology, Russian Academy of Sciences; St. Petersburg)* Oxidative stress: influence of L-kynurenine on cellular proliferation in the tissue culture of rat cerebral cortex	10 min
Lanshakov D.A., Kalinina T.S., Sukhareva E.V., Dygalo N.N. *(Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk State University; Novosibirsk)* Dexamethasone influence on the neurotrophic system of the neonatal 3 day old rat brain	10 min
Gorokhova A.S., Medvedeva A.V., Nikitina E.A., Savvateeva-Popova E.V. *(Pavlov Institute of Physiology, Russian Academy of Sciences; Herzen Russian Pedagogical University; St. Petersburg)* Weak static magnetic field as the stress factor influencing transcriptional activity in *Drosophila melanogaster*	10 min
Birukova E.G., Savin G.A. *(State Socio-Pedagogical University, Volgograd)* Biochemical test of stress	10 min
Nechaeva M.S., Dorokhov E.V., Kudryavtseva A.A., Galitsina D.O. *(Voronezh State Medical University named after N.N. Burdenko, Voronezh)* Evaluation of the effectiveness of speleoclimatotherapy in the prevention of chronic stress with the help of micronucleus test of buccal epithelium	10 min
Zorina I.I., Zakharova I.O., Derkach K.V., Bayunova L.V., Romanova I.V., Shpakov A.O. *(Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg)* Functional state of hypothalamic neurons in agouti-mice (Ay/a) and the effect of long-term metformin therapy on it	10 min
Discussion	
Open Company "Algorithm" *(St. Petersburg)* Experience of import substitution of laboratory equipment for research in the field of physiology	5 min
Break 13:00 – 14:00	

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Poster session 2 (14:00–15:00)

Chairpersons: *Tyulkova E.I., Kalinina T.S., Belyakov A.V.*

Abkhairova E.E., Ebubekirova L.Sh., Gizatullina G.R., Slyusarenko A.A. *(Medical Academy named after S.I. Georgievsky, Vernadsky Crimean Federal University, Simferopol)*

Estimation of the area of psychological and physical stress among the students with different levels of physical activity using Lüscher color test

Ametov A.N., Emirsanova E.R., Murtazaev R.K., Bogdanova M.A., Tymchenko S.L. *(Medical Academy named after S.I. Georgievsky, Vernadsky Crimean Federal University, Simferopol)*

Psychological characteristics of resistance to stress of medical students

Astaschenko A.P. *(Voronezh State Medical University named after N.N. Burdenko, Voronezh)*

Electroencephalographic characteristics of the attentional bias by visual perception of humane and aggressive behavior in the problem of the «dot probe»

Bazhan N.M., Kazantseva A.Yu., Makarova E.N., Romanova I.V. *(Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk; Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg)*

Activity of the noradrenergic system of the brain in mice with blockade of melanocortin receptors

Dygalo N.N., Bulygina V.V., Kalinina T.S., Sukhareva E.V., Drozd U.S., Shishkina G.T., Lanshakov D.A. *(Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk State University; Novosibirsk)*

Glutamatergic regulation of stress-induced behavioral responses

Efimov A.L., Sigua B.V., Sahno D.S., Zaharov E.A. *(Pavlov Institute of Physiology, Russian Academy of Sciences, Saint-Petersburg State University, North-Western State Medical University named after I.I. Mechnikov; St. Petersburg)*

Features of treatment of acute ulcers and erosions of the gastrointestinal tract induced by non-steroidal anti-inflammatory drugs

Emirsanova E.R., Ametov A.N., Murtazaev R.K., Bogdanova A.M., Tymchenko S.L. *(Medical Academy named after S.I. Georgievsky, Vernadsky Crimean Federal University; Simferopol)*

Peculiarities of adaptation of medical students` cardiovascular system to the educational process according of heart rate variability

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Poster session 2 (14:00–15:00)

Chairpersons: *Tyulkova E.I., Kalinina T.S., Belyakov A.V.*

Gizatullina G.R., Zalata O.A. *(Medical Academy named after S.I. Georgievsky, Vernadsky Crimean Federal University, Simferopol)*

Assessment of the emotional state of medical students. Finding ways to prevent stress during study at high school

Hamouda N., El-Agroudy E.J., Bekhit A.A. *(Department of Clinical Pharmacology, Faculty of Medicine; Department of Pharmaceutical Chemistry, Faculty of Pharmacy; Alexandria University, Alexandria, Egypt)*

Novel pyrazole derivative as a promising anti-inflammatory, analgesic agent

Kariofillidis I.A., Zalata O.A. *(Medical Academy named after S.I. Georgievsky, Vernadsky Crimean Federal University; Simferopol)*

Risk of developing orthorexia (*ortorexia neurosa*) in students of different gender, nationality and training level

Kashká L.R., Zhukova A.V., Bogdanova A.M., Zalata O.A., Evstafeva E.V. *(Medical Academy named after S.I. Georgievsky, Vernadsky Crimean Federal University; Simferopol)*

Effect of endogenous mercury content on the qualitative characteristics of sleep and personality traits of medical students

Lycheva N.A. *(Altai State Medical University, Barnaul)*
State of microcirculation and haemostasis in different periods after moderate hypothermia in rats

Morina I.Yu., Stankova E.P. *(Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg)*

Development of the hypothalamus orexinergic system in rats on the background of prenatal stress

Morozova O.Yu., Komkova O.P., Filaretova L.P. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)*

Impact of stress and remote ischemic postconditioning on indomethacin-induced erosions in the stomach and intestine of rats

Nikitina L.S., Gorbacheva E.L. *(Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, Saint-Petersburg State University; St. Petersburg)*

Functional state of the hypothalamic-pituitary-adrenocortical system in rats of Krushinsky-Molodkina line compared to Wistar rats

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Poster session 2 (14:00–15:00)

Chairpersons: *Tyulkova E.I., Kalinina T.S., Belyakov A.V.*

Nurgaliev T.I., Gorbacheva E.L., Nikitina L.S. *(Herzen Russian Pedagogical University, Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, Saint-Petersburg State University; St. Petersburg)*

Features of stress reactivity of the hypothalamic-pituitary-adrenocortical system in rats of Krushinsky-Molodkina line genetically predisposed to audiogenic epilepsy

Podvigina T.T., Bagaeva T.R. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)*

Non-ulcerogenic stress stimulations can be transformed into ulcerogenic in experimental models of streptozotocin-induced diabetes in rats

Polozov A.S., Dmitrieva Yu.V., Gromova L.V. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)*

Reaction of the intestinal digestive enzymes and absorption of glucose on a single administration of different doses of corticosterone

Rybitskaya V.S.,Tyimchenko S.L. *(Medical Academy named after S.I. Georgievsky, Vernadsky Crimean Federal University; Simferopol)*

Psychological conditions of psychosomatic disorders in medical students

Saveleva L.O., Mihrina A.L., Romanova I.V. *(Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg)*

Influence of different fragments of the agouti-like peptide (87-132 and 25-31) on the functional state of noradrenergic neurons *locus coeruleus* in mice C57DL/6J

Semenov D.G., Belyakov A.V. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)*

Use of TL tests and elevated criss-cross labyrinth to study the effects of severe hypobaric stress rats

Skomorokhova E.B., Puchkova V.A., Kostrova T.A., Melekhova A.S., Dyuzhikova N.A., Kashuro V.A. *(Pavlov Institute of Physiology, Russian Academy of Sciences, Institute of Toxicology, Federal Medical-Biological Agency; St. Petersburg)*

Influence of prolonged emotional-pain stress effect on behavior in open field test, pain sensitivity and blood biochemical parameters of Wistar rats

Sorokina L.E., Bogdanova A.M., Tyimchenko S.L. *(Medical Academy named after S.I. Georgievsky, Vernadsky Crimean Federal University; Simferopol)*

Personal prerequisites for the formation of emotional burnout among medical students

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Poster session 2 (14:00–15:00)

Chairpersons: *Tyulkova E.I., Kalinina T.S., Belyakov A.V.*

Sroslova G.A. *(Volgograd State University, Volgorgad)*

Features of leukocytic reaction to the introduction of lipopolysaccharide to the animals with different levels of general non-specific reactivity of the organism

Stankova E.P., Morina I.Yu. *(Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg)*

Influence of prenatal stress on the formation of behavior in early postnatal development period of rat

Sudalina M.N. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)*

Dependence of the effect of dexamethasone on expression of glucocorticoid and mineralocorticoid receptors in the mucosa of the stomach from the duration of its action

Sukhareva E.V., Kalinina T.S., Lanshakov D.A., Bulygina V.V., Dygalo N.N. *(Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk State University; Novosibirsk)*

Influence of stress hormones on gene expression of early response in the divisions of neonatal brain

Tyunina O.I., Dorokhov E.V. *(Voronezh State Medical University named after N.N. Burdenko, Voronezh)*

Influence of the course of speleoclimate therapy on the processes of free radical oxidation of the oral liquid in medical students

Zharova O.A., Titov A.L., Shpakova E.A., Derkach K.V., Shpakov A.O. *(Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg)*

Influence of immunization of rats with a peptide derived from the second extracellular loop 1B-serotonin receptor on the behavioral responses

Zhukova A.V., Kashká L.R., Abkhairova E.E., Ebubekirova L.Sh. *(Medical Academy named after S.I. Georgievsky, Vernadsky Crimean Federal University; Simferopol)*

Relationship of chronotype and characteristics of sleep quality in medical students. Risk of emotional stress in individuals with different chronotype

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Poster session 2 (14:00–15:00)

Chairpersons: *Tyulkova E.I., Kalinina T.S., Belyakov A.V.*

Zhukova A.D., Leonchik A.O., Karpova E.B. *(Pavlov Institute of Physiology, Russian Academy of Sciences, Saint-Petersburg State University; St. Petersburg)*

Stress of parental separation in the adolescents of sports and social boarding schools

Vetrovoy O.V., Sarieva K.V., Zenko M.Yu. *(Pavlov Institute of Physiology, Russian Academy of Sciences, Saint-Petersburg State University; St. Petersburg)*

Role of HIF-1 in the normalization of antioxidant and redox status in the hippocampus of rats that survived severe hypoxic stress, using hypoxic postconditioning

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Scientific session 4 (15:00–18:00) ***Chairpersons:*** *Ordyan N.E., Dyuzhikova N.A., Shishkina G.T.*	
Amagase K., Kano Y., Kosaka Y., Matsumoto K., Kato S. *(Division of Pathological Sciences, Department of Pharmacology and Experimental Therapeutics, Kyoto Pharmaceutical University, Kyoto, Japan)* Glutamate is effective in *Helicobacter pylori*-induced gastritis	15 min
Ordyan N.E., Akulova V.K., Pivina S.G. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Immediate and long-term effects of prenatal stress: role of glucocorticoid hormones	15 min
Kalinina T.S., Sukhareva E.V., Bulygina V.V., Lanshakov D.A., Shishkina G.T., Dygalo N.N. *(Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk State University; Novosibirsk)* Mechanisms involved in the regulation of key enzymes of brain monoamine synthesis by glucocorticoids during development	15 min
Tyulkova E.I., Vataeva L.A., Vetrovoy O.V., Sarieva K.V. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Mechanisms of the pathological consequences of prenatal injection of synthetic hormone dexamethasone	15 min
Bulygina V.V., Kalinina T.S., Lanshakov D.A., Dygalo N.N. *(Institute of Cytology and Genetics, Novosibirsk State University; Novosibirsk)* Effect of dexamethasone on expression of BDNF and NT3 in the hippocampus of neonatal rats	15 min
Zubareva O.E., Schwarts A.P., Trofimov A.N., Kalemenev S.V. *(Institute of Experimental Medicine, Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg)* Neonatal introduction of bacterial endotoxin leads to disturbances of cognitive functions and stress reactivity of adult rats	15 min
Butkevich I.P., Mikhailenko V.A., Vershinina E.A. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Correction of adaptive behavior, disturbed by stressful action at an early age, in adult rats of both sexes	15 min
Break 15 min	

October 13, 2017 Pavlov Institute of Physiology RAS (St. Petersburg, 6 Makarova nab.)	
Scientific session 4 (15:00–18:00) ***Chairpersons:*** *Ordyan N.E., Dyuzhikova N.A., Shishkina G.T.*	
Shishkina G.T., Kalinina T.S., Bulygina V.V., Bannova A.V., Dygalo N.N. *(Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk State University; Novosibirsk)* Regulators of serotonergic activity and neuroplasticity in adaptive and adverse responses to stress exposure	15 min
Dyuzhikova N.A., Pavlova M.B., Shiryaeva N.V., Levina A.S., Puchkova V.A., Vaido A.I. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Desynchronization of epigenetic processes in the brain of rats with different excitability of the nervous system under conditions of long-term emotional painful stress	15 min
Saulskaya N.B., Marchuck O.E., Sudorgina P.V. *(Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg)* Prefrontal mechanisms of control over psychoemotional stress	15 min
Sollertinskaya T.N., Shorokhov M.V. *(Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, St. Petersburg)* Stress: peptide bioregulators in the compensation of functions disturbed by chronic fatigue syndrome of the brain in primates	15 min
Closing of the Symposium	