



**First Pavlov State Medical University of St. Petersburg
Biochemistry Department of Scientific Centre**

**8th International Scientific conference on Clinical Biochemistry
December 3-5, 2015, Saint-Petersburg, Russia**

Conference language: Russian, English

Please notify us of the interest in participating in the conference before the end of October 2015! To do so, fill out and send us the registration form. The form is located at the end of the letter.

First Pavlov State Medical University of St. Petersburg. 6-8 Lev Tolstoy street, St. Petersburg, Russia, 197022. (**Building 2, third floor, Hall of the Scientific Council**).

Award ceremony a winner of Young Scientists presentations competition December 5 (6), 2015.

Scientific topics

1. Metabolome, peptidome and proteome of blood plasma and urine.
2. Clinical and biochemical characterization of nutritional status.
3. Homoarginine and basic amino acid derivatives in clinical chemistry and pharmacology
4. Analytical methods in clinical chemistry.
5. Drug monitoring.

The Conference program

December 3, 2015

Opening Ceremony

Keynote lecture

Symposium 1: Metabolic and protein markers – From single markers to metabolomic and proteomic profiling

Symposium 2: Methodological aspects, pathogenetic role and diagnostic significance of homoarginine assay

We are proud to announce that the scientific management of First Pavlov State Medical University of St. Petersburg will award the best three oral presentations.

Poster presentation (A1 format) should be available during the Conference (December 3 - 4)

December 4, 2015

Symposium 3: Clinical and biochemical characteristics of nutritional status

Symposium 4: Analytical methods in clinical chemistry. Drug monitoring

December 5, 2015

Social events

The next edition of scientific program – October 19, 2015.

General requirements for Abstract:

Volume is no more than 2 pages (Times New Roman, size of type 12, interval 1.5). Work should not contain figures and tables

Abstract submission deadline not later October 15, 2015. All accepted abstracts will be published on the website of the University and will be available on the network for at least 2 years. Publication in the online Abstract Book of the Conference is FREE.

Publication in printed copy of Abstracts Book requires payment of 7 euro.

Venue: First Pavlov State Medical University of St. Petersburg.

6-8 Lev Tolstoy street, St. Petersburg, Russia, 197022.

Metro: Petrogradskaya

Accommodation

1. "Viborgskaya" hotel <http://viborgskaia.ru>
2. Stony Island Hotels <http://stonyisland.com>
3. Silver Age Hotel <http://eng.silverhotel.ru>

Transfer

From Airport Pulkovo to Metro station Moskovskaya:

1. Taxi +7 812 777-77-70 (number discount card 5577) – 450 P (€ 7)
2. Bus 39 (Airport Pulkovo1), Bus 13 (Airport Pulkovo2) – 30 P (€ 0.4)

From Metro station Moskovskaya to Metro station Petrogradskaya:

Blue (2) Subway line – 30 P (€ 0.4)

Additional Information:

1. Current information will be posted on the official website of the First Pavlov State Medical University of St. Petersburg in heading "Conference".
2. All travel and accommodation expenses paid by the participants.
3. More detailed information will be added by mail after recall.

Contacts

Coordinator of conference:

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Scientific committee:

Head of the Department of Biochemistry

MD, Professor

Alexander Zhloba

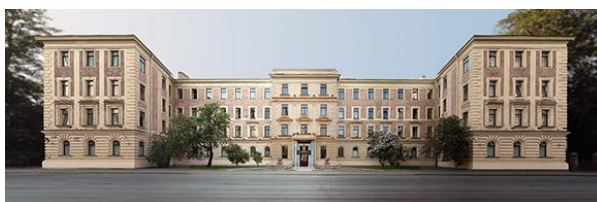
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Join us in Saint-Petersburg!



Registration Form

Please send by e-mail to:

Elizaveta Alexeevskaya
alizlex@mail.ru

Family name:	
First name:	Gender: Age:
Organisation / Institution:	
Department:	
Position:	
City:	Country:
Telephone:	
E-mail:	
Preferred Presentation*: Oral <input type="checkbox"/> Poster <input type="checkbox"/>	
Title of presentation:	

* Every effort will be made to satisfy those who wish to make oral presentations. However, the available slots for such presentations will be limited and, in the event that these are exceeded, the organisers reserve the right to assign them to the poster session.

HOMOARGININE AND BASIC AMINO ACID DERIVATIVES IN PATIENTS WITH PATHOLOGY OF THE LEFT VENTRICULAR OUTFLOW TRACT

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Introduction. Homoarginine (Harg) formed mainly as a byproduct in the creatine biosynthesis pathway in arginine:glycine amidinotransferase (AGAT) catalytic step or in reactions of urea cycle. Reduced rate of Harg, elevated contents of asymmetric dimethylarginine (ADMA), and symmetric dimethylarginine (SDMA) in blood is very often found in groups of patients with high levels of mortality from cardiovascular disease. Pathology of the left ventricular outflow tract (thoracic aortic aneurysm) is one of the main causes of sudden death flowing without marked manifestations of atherosclerosis and metabolic abnormalities of carbohydrate and lipid metabolism. The aim of this study was to determine the levels of Harg, ADMA, SDMA, ϵ -N-trimethyllysine (TML) in patients with aneurysm N = 63, hereinafter - med (Q25- Q75), 61 (45-66) or aortic stenosis N = 62 (47 -73) in the group N = 30 donors, 56 (38-60) years.

Methods. Pyruvate and lactate concentrations were determined in plasma to control the mitochondrial dysfunction. Other functional and routine biochemical tests were applied to control of dyslipidemia, obesity, diabetes, coronary heart disease.

Results. The concentrations of total homocysteine (tHcy), ADMA, SDMA ($p < 0.0001$ for all) were higher in patients than in healthy individuals. According to obtained data there is strong association between ascending aorta diameter and plasma ADMA level. Levels HR and TML were 1.60 (0,86-2,31) and 0.28 (0,17-0,51) μ M significantly lower ($p < 0.001$) than that of the donors - 2.58 (1,33-4,17) and 0,49 (0,32-0,78) M, respectively. Since TML is a key metabolites formed in the mitochondria for subsequent synthesis of carnitine, its plasma concentration may reflects the rate of carnitine biosynthesis to ensure the transport of fatty acids in the tissues. 1.75 times reducing of the TML level in total patients group can be considered as one of the indicators of systemic dysfunction of the mitochondrion of the body, as well as the degree of methylation of lysine-rich proteins (hypomethylation). Homoarginine levels also dropped in the examined patients by 1.61 times, probably indicating a decrease of AGAT activity in the tissues.

Conclusion. To characterize patients with impaired circulation not only by endothelial dysfunction testing but also by markers of mitochondrial dysfunction it advisable to identify the levels of Harg and possibly TML. This study was supported by The Russian Foundation for Basic Research № 15-04-02480.