Full Paper _____ *Thematic Section:* Biochemical Research.
Registration Code of Publication: 14-38-4-16 *Subsection:* Chemistry of Peptides.
The article is published on the materials of the report to the Scientific and Practical Conference "New Chemical-Pharmaceutical Technologies" held in May 28, 2014 at D.I. Mendeleev RCTU.
Publication is available for discussion in the framework of the on-line Internet conference "*Butlerov readings*".
http://butlerov.com/readings/
Contributed: June 26, 2014.

Thematic course: Peptide Inhibitors of Platelet Aggregations. Part 1.

Development of new peptide antiagregatsionnyh heteromeric with imidazo[4,5-e]benzo[1,2-c;3,4-c']difuroxan moiety

© **Alexey A. Alexeev**,[1]*+ **Maxim I. Brylev**,[1]*+ **Vyacheslav L. Korolev**,[1] **Dmitriy S. Lotorev**,[1] **Anton Yu. Lizunov**,[2] **Natalia I. Zaitseva**,[1] **Lyudmila A. Pavlova**,[1]* **Victor P. Ivshin**,[3] and **Olga Yu. Domasheva**[4]

[1] *Laboratory of Biologically Active Compounds. SRI of Pharmacy. I.M. Sechenov First Moscow State Medical University. Trubetskaya St., 8, Block 2. Moscow, 119991. Russia.*
Phone: +7 (495) 708-39-71. E-mail: alexeevalexei1991@mail.ru.
[2] *Department of Higher Mathematics. Moscow Institute of Physics and Technology (State University). Kerchenskaya St., 1a, Block 1. Moscow, 117303. Russia. Phone: +7 (495) 408-45-54.*
[3] *Medical University. Mari State University. Lenin Sq., 1. Yoshkar-Ola, Russia 424000.*
[4] *Kursk State University. Radishcheva St., 33. Kursk, 305000. Russia.*

*Supervising author; +Corresponding author

Keywords: GPIIb/IIIa receptors of platelets, Inhibition of platelet aggregation, computer simulation, imidazo[4,5-e]benzo[1,2-c;3,4-c']difuroxans, heteromeric peptides.

Abstract

With the application of program Algokomb, mathematical simulation of heteromeric peptides comprising imidazo[4,5-e]benzo[1,2-c;3,4-c']difuroxan moiety. Effectiveness of their binding with GP IIb/IIIa-receptors of platelets is confirmed. The generated compounds were synthesized in the conditions of automatic peptide synthesizer Applied Biosys-tems 433A with the use of Fmoc-strategy. Evaluation of antiplatelet activity modeled heteromeric peptides showed the presence of dose-dependent inhibition of ADF-induced platelet aggregations.