



Saratov Local Cluster Meeting: Clinical Studies in Biophotonics: Problems and Ethical Issues

Organized by

N.G. Chernyshevsky Saratov State University
Photonics4Life Consortium of EC FP7: Network of Excellence for Biophotonics
Institute of Precise Mechanics and Control, Russian Academy of Sciences
Research-Educational Institute of Optics and Biophotonics at Saratov State University
Saratov State Medical University
SPIE Saratov State University Student Chapter
OSA Saratov State University Student Chapter

Chairs

Valery V. Tuchin, Saratov State University
Alexey N. Bashkatov, Saratov State University

Secretary

Maxim A. Vilensky, Saratov State University

ORAL SESSION

1. **Clinical Studies on Biophotonics in LCS: Problems and Ethical Issues**, Valery V. Tuchin, Saratov State University, Russia, Institute of Precise Mechanics and Control RAS
2. **Laser Technologies in Medicine and Surgery**, Sergey V. Kapralov, Saratov State Medical University, Russia
3. **Laser application in otolaryngology** Anatoly B.Knyazev, Saratov State Medical University, Russia
4. **New technologies for diagnosis and treatment of eye diseases** Tatyana G. Kamenskih, Saratov State Medical University, Russia
5. **Approval of human clinical trials: CRDF procedure** Elina A. Genina, Saratov State University, Russia
6. **Phototherapy of chronic dermatoses** Natal'ya A. Slesarenko, Saratov State Medical University, Russia
7. **Dental activity: Photoactivated disinfection in preventive dentistry and surgical aids in orthodontics** Dmitry E. Suetenkov, Saratov State Medical University, Russia
8. **Experimental researches: animal models in non-clinical studies** Alla B. Bucharskaya, Galina N. Maslyakova
9. **Biomedical applications of gold and composite nanoparticles** Nikolai G. Khlebtsov, Institute of Biochemistry and Physiology of Plants and Microorganisms RAS
10. **Photodynamic action on microorganisms using nanoparticles** Elena S. Tuchina, Saratov State University, Russia

POSTER SESSION:

1. **Objective prediction of recurrence of bleeding from acute gastric and duodenal ulcers** Ilya A. Frolov, Saratov State Medical University, Russia
2. **Experimental simulation of laser fenestration of the liver** Irina.A. Melnikova
3. **The way of optimization the laser endoscopic hemostasis** Veniamin A. Grishaev
4. **The experience of laser surgical treatment of snoring** Ekaterina K. Evdokimova
5. **The RGB color space derivatives: selection for the human skin imaging** Leonid E. Dolotov, Saratov State University, Russia
6. **Mathematical simulation of endothelia-dependent relaxation of smooth muscle cells** Anastasia U. Neganova, Dmitry E. Postnov, Saratov State University, Russia
7. **The study of the human nail bed blood flow dynamics under the action of optical clearing agents with the full - field speckle - capillaroscopy technique** Polina A. Timoshina¹, Ekaterina A. Zubkina¹, Natalia V. Tsapurina¹, Dmitry N. Agafonov¹, Maxim A. Vilensky¹, Elina A. Genina¹, Valery V. Tuchin^{1,2}, 1 - Saratov State University, Russia, 2 - Institute of Precise Mechanics and Control RAS
8. **Morphological changes in internal organs after prolonged administration of iron nanoparticles** Nikita A. Navolokin, X.M. Kong, Galina N. Maslyakova, Alla B. Bucharskaya, Saratov State Medical University, Russia
9. **Corneal graft status after penetrating keratoplasty optic** Nadegda R. Lopatinskaya, Saratov State Medical University, Russia

10. **Immunohistochemical and immunocytochemical studies of human eye lens in various forms of cataract** Antonina S. Tishkova, Saratov State Medical University, Russia
11. **Electrical stimulation with bio-feedback and magnetic sympatho-correction in the treatment of patients with primary open-angle glaucoma** Ekaterina V. Veselova, Saratov State Medical University, Russia
12. **Laser destruction as the optimal method of treatment of benign skin tumors** Marya A. Reznikova, Natal'ya A. Slesarenko, Saratov State Medical University, Russia
13. **Glucose impact on the structure of ocular tissues** Anzhelika S. Orlova¹, Tatyana G. Kamenskikh¹, Ivan D. Kamenskikh¹, Igor O. Kolbenev¹, Alexey N. Bashkatov², Elina A. Genina², Valery V. Tuchin^{2,3,1} - Saratov State Medical University, Russia, 2 - Saratov State University, Russia, 3 - Institute of Precise Mechanics and Control RAS
14. **OCT investigation of skin optical clearing by PEG-300** Darya K. Tuchina¹, Alexey N. Bashkatov¹, Elina A. Genina¹, Valery V. Tuchin^{1,2}, 1 - Saratov State University, Russia, 2 - Institute of Precise Mechanics and Control RAS
15. **Study of photodynamic action of carbon nanoparticles on RBC using digital holographic microscopy** Yana V. Tarakanchikova¹, Natalya V. Tkachenko¹, Olga A. Perepelitsina^{1,2}, Vladimir P. Ryabukho^{1,2}, 1 - Saratov State University, Russia, 2 - Institute of Precise Mechanics and Control RAS
16. **Synthesis of iron oxide nanoparticles for inhibition of bacteria growth** Maria V. Koulikova, Elena S. Tuchina, Vyacheslav I. Kochubey, Saratov State University
17. **Absorption and scattering properties of muscle tissue** Marina D. Kozintseva, Alexey N. Bashkatov, Vyacheslav I. Kochubey, Elina A. Genina, Valery V. Tuchin, Saratov State University
18. **Monitoring the rat's pancreas reperfusion changes with speckle-capillaroscopy** Dmitry N. Agafonov¹, Polina A. Timoshina¹, Maxim A. Vilensky¹, Valery V. Tuchin^{1,2}, 1 - Saratov State University, 2 - Institute of Precise Mechanics and Control RAS
19. **Glucose determination using chirped photonic crystal fiber** Anton V. Malinin, Saratov State University
20. **Chirped waveguides application for complex analysis of the blood** Anastasia A. Zanishevskaya¹, Anton V. Malinin¹, Yulia S. Skibina¹, Yurii. Silokhin¹, Valery.V. Tuchin^{1,2}, Valery A. Dubrovskiy³, Alexey A. Dolmashkin³, 1 - Saratov State University, Russia, 2 - Institute of Precise Mechanics and Control RAS, 3 - Saratov State Medical University, Russia