

# 15<sup>th</sup> INTERNATIONAL CONFERENCE

07 MAY  
2024



## BIOMATERIALS AND NANOBIMATERIALS:

Recent Advances Safety-Toxicology and Ecology Issues

ONLINE

CRETE | GREECE

[www.bionanotox.org](http://www.bionanotox.org)

10.00- 15.30 Chair: **Sergei Eremin, Natalia Klyachko**

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| 10.15<br>-<br>10.30 | <b>APPLYING PHARMACOLOGICAL MODELS OF GLIOBLASTOMA IN THE RESEARCH FOR NOVEL NANOMEDICINE FORMULATIONS</b><br><b>M. Spanakis<sup>1,2,*</sup>, E.Tzamali<sup>2</sup>, G. Tzedakis<sup>2</sup>, A. Tsatsakis<sup>1,2</sup>, V. Sakkalis<sup>2,*</sup></b><br><i><sup>1</sup>Department of Toxicology &amp; Forensic Sciences, School of Medicine, University of Crete, Heraklion, Greece</i><br><i><sup>2</sup>Computatioal Biomedicine Lab, Institute of Computer Science, Foundation for Research &amp; Technology Hellas (FORTH)</i>                                                                                                                                              |
| 10.30<br>-<br>10.45 | <b>SUPEROXIDE DISMUTASE-BASED BLOCK IONOMER COMPLEXES: SYNTHESIS AND CHARACTERISATION</b><br><b>A. Doroschenko, N. Kozyrev, A. Lopukhov, N. Klyachko</b><br><i>Faculty of Chemistry, M.V. Lomonosov Moscow State University, Moscow, Russia</i>                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 10.45<br>-<br>11.00 | <b>SYNTHESIS AND CHARACTERIZATION OF TRACERS AND DEVELOPMENT OF A FLUORESCENCE POLARIZATION IMMUNOASSAY FOR CHLORAMPHENICOL WITH HIGH SENSITIVITY IN MILK</b><br><b>L. I. Mukhametova<sup>1</sup>, S. A. Eremin<sup>1</sup>, A. Osipova<sup>2</sup>, A. G. Tereshchenkov<sup>3</sup>, N.V. Sumbatyan<sup>1</sup></b><br><i><sup>1</sup>Department of Chemistry, Lomonosov Moscow State University, Moscow, 119991 Russia</i><br><i><sup>2</sup>MSTU Bayman, Moscow, Russia</i><br><i><sup>3</sup>Belozersky Research Institute of Physico-Chemical Biology, Moscow State University, Moscow, 119234 Russia</i>                                                                     |
| 11.00<br>-<br>11.15 | <b>USE OF AMYLASE BINDING FOR THE QUANTIFICATION OF QUERCETIN BY FLUORESCENCE POLARIZATION ANALYSIS</b><br><b>S.M. Filimonova<sup>1</sup>, N. Ghadiri<sup>1</sup>, L. I. Mukhametova<sup>2</sup>, S. A. Eremin<sup>2</sup></b><br><i><sup>1</sup>Institute of Pharmacy, I.M. Sechenov First Moscow State Medical University (Sechenov University), Moscow, 119435 Russia</i><br><i><sup>2</sup>Department of Chemistry, Lomonosov Moscow State University, Moscow, 19991 Russia</i>                                                                                                                                                                                                |
| 11.15<br>-<br>11.30 | <b>STUDYING THE MIGRATION OF PHTHALATES AND OTHER VOLATILE COMPOUNDS FROM DISPOSABLE TABLEWARE USED FOR FOOD PREPARATION AND CONSUMPTION</b><br><b>D. N Zaslavskya<sup>1</sup>, A. V Pirogov<sup>2</sup></b><br><i><sup>1</sup>National Scientific Center for "Toxicological and Biological Safety of Medical Devices" Limited, Moscow, Russia</i><br><i><sup>2</sup>Department of Chemistry, Lomonosov Moscow State University, Moscow, 119991 Russia</i>                                                                                                                                                                                                                         |
| 11.30<br>-<br>11.45 | <b>WITHDRAWN</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 11.45<br>-<br>12.00 | <b>INTERACTION BETWEEN THE LIPOSOMAL FORM OF LEVOFLOXACIN, COATED WITH CHITOSAN-MANNOSE, AND PULMONARY SURFACTANT</b><br><b>I. Kolmogorov<sup>1</sup>, V. Timoshenko<sup>2</sup>, A. Sybatchin<sup>3</sup>, I. Grigoryan<sup>4</sup>, I. Le-Deygen<sup>*1</sup></b><br><i><sup>1</sup>Chemical enzymology department, Faculty of Chemistry, Lomonosov MSU, Moscow, Russia</i><br><i><sup>2</sup>Colloid chemistry department, Faculty of Chemistry, Lomonosov MSU, Moscow, Russia</i><br><i><sup>3</sup>Polymer department, Faculty of Chemistry, Lomonosov MSU, Moscow, Russia</i><br><i><sup>4</sup>Biophysics department, Faculty of Physics, Lomonosov MSU, Moscow, Russia</i> |

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| 12.00<br>–<br>12.15 | <b>SYNTHESIS OF METHYLPHOSPHORYLATED OLIGOMANNOSIDES STRUCTURALLY RELATED TO LIPOPOLISACCHARIDE O-ANTIGENS OF <i>KLEBSIELLA PNEUMONIAE</i> SEROTYPE O3 AND THE STUDY OF THEIR IMMUNOLOGIC PROPERTIES</b><br><b><u>E. M. Denisova</u><sup>1</sup>, E. A. Kurbatova<sup>2</sup>, V. B. Krylov<sup>1</sup>, N.E. Nifantiev<sup>1</sup></b><br><sup>1</sup> N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Leninsky prospect 47, 119991 Moscow, Russia.<br><sup>2</sup> I.I. Mechnikov Research Institute for Vaccines and Sera, Moscow, Russia                                           |
| 12.15<br>–<br>12.30 | <b>SYNTHESIS OF OLIGOSACCHARIDES RELATED TO <i>CRYPTOCOCCUS NEOFORMANS</i> GALACTOXYLOMANNAN FRAGMENTS</b><br><b><u>V. S. Dorokhova</u>, B. S. Komarova, V. B. Krylov, N. E. Nifantiev</b><br>N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Leninsky prospect 47, 119991 Moscow, Russia.                                                                                                                                                                                                                                                                                             |
| 12.30<br>–<br>12.45 | <b>WITHDRAWN</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 12.45<br>–<br>13.00 | <b>APPROACHES TO REDUCE CONTAMINATION OF FOOD RAW MATERIALS MYCOTOXINS ZEARELENONE</b><br><b>Valiullin L.R.<sup>1</sup>, Mukhammadiev Rish.S.<sup>1</sup>, Raginov I.S.<sup>1</sup>, Mingaleev D.N.<sup>1</sup>, Zakharenko A.M.<sup>2</sup>, Golokhvast K.S.<sup>2,3</sup></b><br><sup>1</sup> Federal Center for Toxicological, Radiation and Biological Safety, Kazan, Russia<br><sup>2</sup> Siberian Federal Scientific Center of Agrobiotechnologies of the Russian Academy of Sciences, Krasnoobsk, Russia<br><sup>3</sup> Advanced Engineering School "Agrobiotek", Tomsk State University, Tomsk, Russia |
| 13.00<br>–<br>13.15 | <b>A COMPARATIVE STUDY OF TEMPLATE-ASSISTED ENZYMATIC AND CHEMICAL POLYMERIZATION OF ANILINE. FUNCTIONAL PROPERTIES OF THE RESULTING PRODUCTS.</b><br><b><u>O.V. Morozova</u><sup>1</sup>, I.S. Vasil'eva<sup>1</sup>, G.P. Shumakovich<sup>1</sup>, <u>E.A. Zaitseva</u><sup>2</sup>, A.I. Yaropolov<sup>1</sup></b><br><sup>1</sup> A. N. Bach Institute of Biochemistry, Research Center of Biotechnology, Russian Academy of Sciences, Moscow, Russia<br><sup>2</sup> Faculty of Chemistry, M. V. Lomonosov Moscow State University, Moscow, Russia                                                           |
| 13.15<br>–<br>13.30 | <b>NEW TRACERS FOR FLUORESCENCE POLARIZATION IMMUNOASSAY OF HERBICIDE 2,4-DICHLOROPHENOXYACETIC ACID</b><br><b><u>M. K. Kolokolova</u><sup>1</sup>, I. A. Shevchenko<sup>1</sup>, S. A. Eremin<sup>1,2</sup></b><br><sup>1</sup> Department of Chemistry, Lomonosov Moscow State University, 119991 Moscow, Russia<br><sup>2</sup> A.N. Bach Institute of Biochemistry, Research Centre of Biotechnology of the Russian Acad. Sci., 119071 Moscow, Russia                                                                                                                                                         |
| 13.30<br>–<br>13.45 | <b>STUDY OF THE EFFECT OF DAILY EXPOSURE TO AN ELECTRIC INSECTICIDE VAPORIZER ON THE DEVELOPMENT OF THE BODY OF WHITE RATS</b><br><b><u>A. I. Vinogradova</u><sup>1</sup>, V. N. Rakitskii<sup>1</sup>, S. V. Kuzmin<sup>1</sup>, A. M. Tsatsakis<sup>2</sup></b><br><sup>1</sup> Federal Scientific Center of Hygiene Named After F.F. Erisman of the Federal, Service On Surveillance for Consumer Rights Protection and Human Well-Being. Moscow region, Mytischki, Russian Federation<br><sup>2</sup> Department of Toxicology & Forensic Sciences, Faculty Medicine, University of Crete, Heraklion, Greece  |

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- 13.45 **3D PRINTED POLYHYDROXYALKANOATE SCAFFOLD FOR BONE DEFECT RECONSTRUCTION**  
- **A. E. Dudaev**<sup>1,2,3</sup>, **E. I. Shishatskaya**<sup>1,2</sup>, **T. G. Volova**<sup>1,3</sup>  
14.00 <sup>1</sup>Federal Research Center "Krasnoyarsk Science Center SB RAS", Institute of Biophysics  
SB RAS, Krasnoyarsk, Russia  
<sup>2</sup>Department of Medical Biology, School of Fundamental Biology and Biotechnology, Siberian Federal University,  
Krasnoyarsk, Russia  
<sup>3</sup>Basic Department of Biotechnology, School of Fundamental Biology and Biotechnology, Siberian Federal University,  
Krasnoyarsk, Russia
- 14.00 **WASTE FISH OILS (WFOs) AS A SUBSTRATE FOR THE SYNTHESIS OF "GREEN" BIOPLASTICS**  
- **K. Yu. Sapozhnikova**<sup>1,2</sup>, **N. O. Zhila**<sup>1,2</sup>, **T.G. Volova**<sup>1,2</sup>  
14.15 <sup>1</sup>Institute of Biophysics SB RAS, Federal Research Center "Krasnoyarsk Science Center SB RAS", 50/50 Akademgorodok,  
660036 Krasnoyarsk, Russia  
<sup>2</sup>Basic Department of Biotechnology, School of Fundamental Biology and Biotechnology, Siberian Federal University,  
79 Svobodnyi Av., 660041 Krasnoyarsk, Russia
- 14.15 **IMMUNOCHROMATOGRAPHIC DETECTION OF ANTIBIOTICS: NANOPARTICLES-BASED TOOLS TO OVERCOME THE**  
- **EXISTING LIMITATIONS**  
14.30 **A. V. Zherdev**  
A.N. Bach Institute of Biochemistry, Research Centre of Biotechnology of the Russian Acad. Sci., 119071 Moscow,  
Russia
- 14.30 **COMPOSITE MACROPOROUS POLYVINYL ALCOHOL HYDROGELS WITH ENTRAPPED POLYPYRROLE FRAGMENTS FOR**  
- **TISSUE ENGINEERING**  
14.45 **D. A. Gladkikh**<sup>1,2</sup>, **A. D. Ivanova**<sup>1,2</sup>, **S. A. Gribova**<sup>1,2</sup>, **M. G. Drozdova**<sup>2</sup>, **A. A. Artyukhov**<sup>1,3</sup>, **E. Markvicheva**<sup>2</sup>  
<sup>1</sup>Mendeleev University of Chemical Technology of Russia, Moscow, Russia  
<sup>2</sup>Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry RAS, Moscow, Russia  
<sup>3</sup>Nesmeyanov Institute of Organoelement Compounds, RAS, Moscow, Russia
- 14.45 **THERAPEUTIC DRUG MONITORING OF POLYMYXININS USING IMMUNOASSAY**  
- **M.A. Burkin**<sup>1</sup>, **I.A. Galvidis**<sup>1</sup>, **Yu.A. Surovoy**<sup>2</sup>, **S.V. Tsarenko**<sup>3</sup>  
15.00 <sup>1</sup>I. I. Mechnikov Research Institute for Vaccines and Sera, 105064 Moscow, Russia  
<sup>2</sup>University College of London Hospital, London NW1 2BU, United Kingdom  
<sup>3</sup>Faculty of Medicine, M.V. Lomonosov Moscow State University, Moscow 119991, Russia
- 15.00 **EVALUATION OF IRON OXIDE NANOPARTICLES (FENPS) BIOCOMPATIBILITY IN AN ENDOTHELIAL MODEL**  
- **L.-N. Thrapsanioti**<sup>1</sup>, **A. N. Kuskov**<sup>2</sup>, **K. Plexousaki**<sup>1</sup>, **I. Spyridaki**<sup>1</sup>, **A. Berdiaki**<sup>1</sup>, **A. Tsatsakis**<sup>3</sup>, **D. Nikitovic**<sup>1</sup>  
15.15 <sup>1</sup>Laboratory of Histology-Embryology, School of Medicine, University of Crete, 71003 Heraklion, Greece.  
<sup>2</sup>Department of Technology of Chemical Pharmaceutical and Cosmetic Substances, D. Mendeleev University of  
Chemical Technology of Russia, 125047 Moscow, Russia.  
<sup>3</sup>Laboratory of Toxicology, School of Medicine, University of Crete, 71003 Heraklion, Greece.
- 15.15 **EVALUATION OF THE COMBINED ACTION OF CHLORSULFURON AND DICAMBA**  
- **S. V. Kuz'min**, **V. N. Rakitskii**, **A. U. Bagreev**, **D. I. Bagreeva**  
15.30 **FBES «F.F. Erisman Federal scientific center of hygiene» of the Federal Service for Surveillance on Consumer Rights**  
**Protection and Human Wellbeing, Institute of hygiene, toxicology of pesticides and chemical safety, Mytishchi,**  
**Russian Federation**