



12<sup>th</sup> INTERNATIONAL CONFERENCE  
**BIOCATALYSIS-2019:**  
FUNDAMENTALS & APPLICATIONS

**SCIENTIFIC  
PROGRAM**



St.Petersburg – Valaam – Kizhi, Russian Federation  
June 24-28, 2019



12<sup>th</sup> INTERNATIONAL CONFERENCE  
**BIOCATALYSIS-2019:**  
**FUNDAMENTALS & APPLICATIONS**

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June 24-28, 2019, St.Petersburg – Valaam – Kizhi, Russian Federation

## SCIENTIFIC PROGRAM

### General Schedule of the Conference

#### June 24, Monday

- 13.00 Participants arriving
- 16.00 Registration in front of boat entrance**
- Introductory lectures**
- 18.30 **Varfolomeev Sergey**  
Department of Chemical Enzymology  
- 45 years of history and achievements
- 19.05 **Kalyuzhnyi Sergey**  
RUSNANO: Fostering a new industry
- 20.00 Departure from St.Petersburg**
- 20.30 Get together Party**

#### June 25, Tuesday

- 7.00- Breakfast
- 8.00
- 8.00- **Excursion Valaam**
- 12.00
- 13.00 Lunch**
- 14.00
- 14.15 Main Hall. Upper Desk**
- 14.15 Conference opening  
Plenary lectures
- 14.30 **Gabibov Alexander**  
Novel approaches for screening biodiversity
- 15.00 **Vladimirov Yuri**  
Enzymes, radicals, diseases and ageing
- 15.30 **Bonch-Osmolovskaya Elizaveta**  
New thermophilic prokaryotes, new metabolic pathways
- 16.00 **Wohlgemuth Roland**  
Extremophilic enzymes for resource-efficient, robust and selective biocatalytic synthesis of small molecules
- 16.30 **Coffee break**
- 17.00 **Session 1.1. Main Hall. Fundamental Biocatalysis 1**
- **Session 2.1. Hall 2. Medicine 1**
- 19.00 **Session 3.1. Hall 3. Analytics 1**
- 19.00 Dinner**
- 20.10 **Upper Desk. Poster Session 1**
- Hall**
- 20.10 **Round table "BioChemMac -30 years. Traditions, Experience, Innovations"**

## June 26, Wednesday

- 7.00-8.00 **Breakfast**
- 8.05 **Main Hall. Upper Desk**  
Plenary lectures
- 8.05 **Varfolomeev Sergey**  
Neuroenzymology: kinetics of biocatalytical reactions in human brain
- 8.35 **Masson Patrick**  
Competing substrate kinetics for michaelian enzymes and for enzymes showing activation/inhibition by excess substrate: application to kinetic analysis of cholinesterases
- 9.10 **Tishkov Vladimir**  
New biocatalysts for processes of fine organic and chiral synthesis with oxidoreductases
- 9.40 **Švedas Vytautas**  
Knowledge-based modulation of enzyme functional properties
- 10.10 **Egorov Aleksey**  
Beta-lactamases - drivers of bacterial antibiotic resistance
- 10.30 **Coffee break**
- 11.00 **Session 1.2. Main Hall. Fundamental Biocatalysis - Structural aspects**  
- **Session 2.2. Hall 2. Industrial Biocatalysis**
- 13.00 **Session 3.2. Hall 3. Analytics 2**
- 13.00 **Lunch**
- 14.00
- 14.10 **Main Hall, Upper Desk**  
Plenary lectures
- 14.10 **Savitsky Alexander**  
Development of new enzyme mechanisms of animal antiviral resistance using African swine fever virus model
- 14.40 **Nemukhin Alexander**  
Diversity of mechanisms in enzyme-catalyzed phosphorus-oxygen bond cleavage reactions
- 15.10 **Ugarova Natalia**  
The emitter as an intramolecular probe in the luciferase active center
- 16.00 **Excursion Kizhy**
- 20.00
- 20.00 **Dinner**
- Upper Desk**
- 21.15 **Poster Session 2**

## June 27, Thursday

- 7.00-8.00 **Breakfast**
- 8.30 **Main Hall. Upper Desk**  
Plenary lectures
- 8.30 **Bronich Tatyana**  
Nanotechnology platforms in cancer therapy
- 9.00 **Kurochkin Ilya**  
Highly sensitive bioanalytical systems based on plasmonic and polymer nanocomposites
- 9.30 **Deev Sergey**  
Smart nanomaterials for biomedical application
- 10.00 **Klyachko Natalia**  
Overcoming Biological Barriers in Proteins Drug Delivery
- 10.30 **Coffee break**
- 11.00 **Session 1.3. Main Hall. Nano 1**  
- **Session 2.3. Hall 2. Fundamental Biocatalysis. Bioinformatics and Computer Modeling**
- 13.00 **Session 3.3. Hall 3. Seminar "How to prepare paperst o ActaNaturae"**

13.00 Lunch  
14.00  
14.15 **Session 1.4. Main Hall, Upper Desk. Extremophiles**  
- **Session 2.4. Hall 2. Nano 2**  
16.15 **Session 3.4. Hall 3. Young Scientists section. Round Table**  
16.15 **Coffee break**  
16.45 **Session 1.5. Main Hall. Medicine 2**  
- **Session 2.5. Hall 2. Fundamental 2**  
18.45 **Session 3.5. Hall 3.**  
19.00 Main Hall Upper Desl. Conference Closing  
  
19.30 **Dinner**

**June 28, Friday**

4.00 Arrival to St.Petersburg  
7.00- Breakfast  
8.00  
9.00 **Leaving of Boatship**

## Sections Schedule

### June 24, Monday

#### Hall 1, Upper Desk

##### Introductory lectures

- 18.30 **Varfolomeev Sergey**  
Department of Chemical Enzymology - 45 years of history and achievements
- 19.15 **Kalyuzhnyi Sergey**  
RUSNANO: Fostering a new industry

#### 20.00 Departure from St.Petersburg

### June 25, Tuesday

#### Hall 1 Upper Desk

Chair persons: Prof. Varfolomeev S., Prof. Masson P.

#### 14.15 Conference opening

##### Plenary Lectures

- 14.30 Gabibov Aleksander, Russian Federation  
Novel approaches for screening biodiversity
- 15.00 Vladimirov Yury, Russian Federation  
Enzymes, radicals, diseases and ageing
- 15.30 Bonch-Osmolovskaya Elizaveta, Russian Federation  
New thermophilic prokaryotes, new metabolic pathways
- 16.00 Wohlgemuth Roland, Poland  
Extremophilic Enzymes for resource-efficient, robust and selective biocatalytic synthesis of small molecules

#### 16.00-16.30 Coffee break

#### Hall 1 Upper Desk

##### Session 1.1. Fundamental Biocatalysis 1

Chair persons: Prof. Philips R., Prof. Demidkina T.

- 17.00 Miroshnikov Konstantin, Russian Federation  
Bacteriophage tail spike proteins: Enzymatic interaction with bacterial polysaccharide directs viral specificity
- 17.20 Smirnov Ivan, Russian Federation  
Amicoumacin A kinases: structure, kinetics and function
- 17.40 Eldarov Mikhail, Tishkov Vladimir, Russian Federation  
Genetic, biochemical and physiological characterization of novel D-amino acid oxidases from *Ogataea parapolyomorpha* DL-1
- 18.00 Muronetz Vladimir, Russian Federation  
Effect of post-translational modifications on the amyloid transformation of proteins
- 18.20 Rozova Olga, Russian Federation  
Malic enzymes in the metabolism of obligate methanotrophs
- 18.40 Martirosyan Levon, Russian Federation  
Changes in peroxidase activity in horseradish (*A Armoracia rusticana*) roots with red light additional irradiation under conditions of aeroponic phytotron

#### Hall 2

##### Session 2.1. Medicine 1

Chair persons: Prof. Likhtenstein G., Dr. Smirnov I..

- 17.00 Belogurov Aleksey, Russian Federation  
Charge-mediated proteasome targeting as a novel type of ubiquitin-independent degrons

- 17.20 Herrmann Martin, Germany  
Aggregated neutrophil extracellular traps are multifaceted biocatalysts.
- 17.40 Gazaryan Irina, Russian Federation  
Activation of antioxidant genetic program: a mechanistic insight
- 18.00 Makhaeva Galina, Russian Federation  
From acetylcholinesterase inhibitors to multitarget ligands: a step forward in Alzheimer's disease drug discovery
- 18.20 Abramov Andrey, UK  
The role reactive oxygen species production in physiology and in mechanisms of neurodegeneration
- 18.40 Demina Olga, Russian Federation  
Design and development of antiplatelet agents.

### Hall 3

#### Session 3.1. Analytical aspects 1

Chair persons: Prof. Ugarova N., Dr. Dokudovskaya S.

- 17.00 Zvereva Maria, Russian Federation  
Oligonucleotide functionalized nanoparticles for SERRS detection of short tumor-derived DNA fragments
- 17.20 Zavarykina Tatyana, Russian Federation  
Association of molecular genetic markers of cell cycle control and DNA repair genes with progression free survival of ovarian cancer patients after platinum-based chemotherapy
- 17.40 Eremin Sergey, Russian Federation  
Enzyme-Linked Immunosorbent Assay (ELISA) with photometric and chemiluminescent detection
- 18.00 Guliev Rustam, Russian Federation  
The use of vibrational spectroscopy for healthcare oriented biosensors
- 18.20 Vasilieva, Aleksandra Russian Federation  
Cell membrane permeability and integrity monitoring using firefly luciferase bioluminescent system
- 18.40 Lomakina Galina, Russian Federation  
Bioluminescent indication of stress effects on living cells

#### 20.10 Upper desk. Poster Session 1

### Hall

#### 20.10 Round table "BioChemMack -30 years. Traditions, Experience, Innovations"

A novel approach to a familiar methods in study of biomolecules.

#### Moderators:

N. E. Tamm, Director General, BioChemMack JSC;

S. M. Staroverov, DChem, Professor

1. MCSGP , N-Rich , SMB.

2. In Search of Metabolic Targets for Novel Therapeutic Strategies

3. Glycobiology - why drugs do not always work?

4. "What is camcorder?" The biological aspect of the video technology - from gel documentation to bioimaging in vivo.

## June 26

### Hall 1

#### Plenary Lectures

Chair persons: Prof. Gabibov A., Prof. Popov V.

- 8.05 Varfolomeev Sergey, Russian Federation  
Neuroenzymology: kinetics of biocatalytical reactions in human brain
- 8.35 Masson Patrick, Russian Federation  
Competing substrate kinetics for michaelian enzymes and for enzymes showing activation/inhibition by excess substrate: application to kinetic analysis of cholinesterases

- 9.10 Tishkov Vladimir, Russian Federation  
New biocatalysts for processes of fine organic and chiral synthesis with oxidoreductases
- 9.40 Švedas Vytautas, Russian Federation  
Knowledge-based modulation of enzyme functional properties
- 10.10 Egorov Aleksey, Russian Federation  
Beta-lactamases - drivers of bacterial antibiotic resistance

### **Session 1.2. Fundamental Biocatalysis. Structural aspects**

**Chair persons: Prof. Hayashi H., Dr. Zvereva M.**

- 11.00 Phillips Robert, United States  
Structure and mechanism of D-ornithine/D-lysine decarboxylase, a stereoinverting Fold-III decarboxylase
- 11.20 Rakitina Tatyana, Russian Federation  
Application of X-ray crystallography, comparative modeling and molecular dynamics to investigation of structural determinants of enzymatic activation and substrate specificity.
- 11.40 Boyko Konstantin, Russian Federation  
3D structure of the natural tetrameric form of human butyrylcholinesterase as revealed by cryoEM, MD and SAXS
- 12.00 Demidkina Tatyana, Russian Federation  
Sulfoxides of sulfur-containing amino acids - suicidal substrates of methionine gamma-lyase as antimicrobial and antimycotic prodrugs.
- 12.20 Bezsudnova Ekaterina, Russian Federation  
Effects of amino acid substitutions in the characteristic sequence motifs on the profile of substrate specificity of PLP fold type IV transaminases
- 12.40 Tishchenko Svetlana, Russian Federation  
Investigation of T2 channel of two-domain laccases

### **Hall 2**

#### **Session 2.2. Applied Biocatalysis**

**Chair persons: Prof. Tishkov V., Dr. Khrenova M.**

- 11.00 Littlechild-Bond Jennifer, UK  
Thermophilic Enzymes for Industrial Biocatalysis
- 11.30 Gusakov Aleksander, Russian Federation  
Lytic polysaccharide monooxygenases: structure, mechanism and function
- 11.55 Batyrova Khorcheska, Canada  
Novel enzymes for biosynthesis and biotransformation of adipic acid
- 12.15 You Delin, China  
Baeyer-Villiger Monooxygenases XanO4 Catalyzes Cyclic Ether Formation
- 12.35 Atroshenko Denis, Russian Federation  
Multipoint mutants of TvDAAO with improved catalytic properties and stability

### **Hall 3**

#### **Session 3.2. Analytics 2**

**Chair persons: Prof. Eremin S., Dr. Trudil D.**

- 11.00 Shumyantseva Viktoria, Russian Federation,  
Cytochrome P450 electrocatalytic systems for drug metabolism modeling, drug discovery and drug-drug interaction studies
- 11.20 Plekhanova Yulia, Russian Federation  
Polyelectrolyte microcapsules with enzymes for use in analytical systems
- 11.40 Suntsova Anastasia, Russian Federation  
New approach to identification of microorganisms with Fourier-transformed infra-red spectroscopy
- 12.00 Yurina Lubov, Russian Federation  
Development of a diagnostic approach based on the detection and quantification of sites of post-translational modifications using the HPLC-MS / MS method in the protein components of blood plasma



- 12.20 Tyubaeva Polina, Russian Federation  
Biopolymer nanofibrous materials for tissue engineering and medicine

**Hall 1 Upper Desk**

**Plenary Lectures**

**Chair persons: Prof. Tishkov V., Dr. Wohlgemuth R.**

- 14.15 Savitsky Alexander, Russian Federation  
Development of new enzyme mechanisms of animal antiviral resistance using African swine fever virus model
- 14.45 Nemukhin Aleksander, Russian Federation  
Diversity of mechanisms in enzyme-catalyzed phosphorus-oxygen bond cleavage reactions
- 15.15 Ugarova Natalia, Russian Federation  
The emitter as an intramolecular probe in the luciferase active center
- 20.10 **Upper desk. Poster Session 2**

**June 27**

**Hall 1**

**Chair persons: Prof. Savitsky A., Prof. Golovin Yu.**

**Plenary Lectures**

- 8.30 Bronich Tatyana, USA  
Nanotechnology platforms in cancer therapy (Engineering Targeted Polymeric Nanocarriers for Drug Delivery)
- 9.00 Deev Sergey, Russian Federation  
Smart nanomaterials for biomedical application
- 9.30 Kurochkin Ilya, Russian Federation  
Highly sensitive bioanalytical systems based on plasmonic and polymer nanocomposites
- 10.00 Klyachko Natalia, Russian Federation  
Overcoming Biological Barriers in Proteins Drug Delivery

**Session 1.3. Nanotechnology 1**

**Chair persons: Prof. Bronich., Prof. Klyachko N.**

- 11.00 Golovin Yurii, Russian Federation  
Possible modes of influence, state and prospects for the application of variable magnetic fields as a means of controlling biochemical systems
- 11.20 Pashirova Tatyana, Russian Federation  
Nanotechnology strategies using oxime-loaded lipid nanoparticles for brain protection and treatment of organophosphorus poisoning
- 11.40 Kazakov Sergey, Russian Federation, USA  
Lipobeads: Mechanisms for Controlled Release of Encapsulated Anticancer Drugs
- 12.00 Kost Olga, Russian Federation  
Inclusion of drugs into nano- and microparticles for use in ophthalmology
- 12.20 Le-Deygen Irina, Russian Federation  
Functionalized lipid drug delivery containers
- 12.40 Shibaeva Anna, Russian Federation  
Polyacrylate of gold is a candidate chemotherapeutic agent for curing melanoma

**Hall 2**

**Session 2.3. Bioinformatics and Computer Modeling**

**Chair persons: Prof. Nemukhin A., Prof. Švedas V.**

- 11.00 Hayashi Hideyuki, Japan  
Quantum-chemical analysis of the catalytic reaction of aspartate aminotransferase

- 11.20 Sokalski Wacław, Poland  
Origins of enzyme catalytic activity explored within theory of intermolecular interactions and biocatalyst design using catalytic fields
- 11.40 Khrenova Maria, Russian Federation  
Towards deep insight into the cephalosporin hydrolysis in the active site of metallo-beta-lactamase
- 12.00 Zlobin Aleksandr, Russian Federation  
Towards application of deep convolutional neural networks to enzyme design
- 12.20 Zalevsky Artur, Russian Federation  
Unraveling Na<sup>+</sup> dependent thrombin activation with large-scale QM/MM simulations
- 12.40 Mikoulinskaia Galina, Russian Federation  
L,D-peptidases of coliphages: structure, properties, regulation and biotechnological potential

### Hall 3

#### Session 3.3. Seminar

- 11.00 Knorre Vera, Russian Federation  
Seminar "How to prepare paperst o ActaNaturae"

### Hall 1

#### Session 1.4. Extremophiles

Chair persons: Prof. Bonch-Osmolovskaya E., Prof. Littlechild-Bond J.

- 14.15 Alekhova Tatyana, Russian Federation  
Microbiom International Space Station
- 14.35 Bulat Sergey, Russian Federation  
Extremophiles in the subglacial Antarctic Lake Vostok
- 14.55 Gavrillov Sergey, Russian Federation  
Novel determinants of extracellular electron transfer underlying exoelectrogenesis and biogenic crystallization of magnetite in a thermophilic bacterium *Carboxydotherrnus ferrireducens*
- 15.15 Naranjo Leopoldo, Ecuador  
Insight into Extremophilic Hydrocarbonoclastic Fungi for Sustainable Development of Oil Industry
- 15.35 Petrovskaya Lada, Russian Federation  
Lipolytic enzymes from permafrost microorganisms
- 15.55 Ravin Nikolai, Russian Federation  
Cloning, expression, and characterization of novel chitinases from extremophilic bacteria

### Hall 2

#### Session 2.4. Nanotechnology 2

Chair persons: Porf. Kurochkin I., Dr. Belogurov A.

- 14.15 Nechitailo Galina, Russian Federation  
Biotechnological experiments at orbital space stations and perspective use of nanotechnology for commercial application
- 14.35 Korzhikova-Vlakh Evgenia, Russian Federation  
Polypeptide nanoparticles as drug delivery systems
- 14.55 Korzhikov-Vlakh Viktor, Russian Federation  
Glycosaminoglycans based nanogels for ocular drug delivery
- 15.15 Vlasova Kseniya, Russian Federation  
Magnetic liposome responsive to super-low frequency alternating magnetic field
- 15.35 Nechaeva Natalia, Russian Federation  
Surface-Enhanced Raman Spectroscopy in Glycated Albumin Detection
- 15.55 Skuredina Anna, Russian Federation  
The development of a fluoroquinolone delivery system with improved pharmacokinetic characteristics using  $\beta$ -cyclodextrin derivatives

### Hall 3

- 14.15 **Session 3.4. Section of young scientist. Round table**

## Hall 1

### Session 1.5. Medicine 2

Chair persons: Prof. Deev S., Prof. Gazaryan I.

- 16.45 Trudil David, USA  
Use of Bacteriophage and lytic enzymes for the detection, treatment and prevention of bacterial infections
- 17.15 Maksimenko Aleksander, Russian Federation  
New challenges of contemporary healthcare. Enzyme derivatives of combined action and conjunctive courses of biocatalysts
- 17.40 Klochkov Sergey, Russian Federation  
Natural scaffolds as modulators of farnesyltransferase activity
- 18.00 Yakovlev Aleksey, Russian Federation  
<sup>1</sup>H NMR *in vivo* study of inhibitory neurotransmitter impact to human brain in videostimulation
- 18.20 Filatova Lubov, Russian Federation  
Interaction of lysozyme with mucoadhesive polymers

## Hall 2

### Session 2.5. Fundamental Biocatalysis 2

Chair persons: Prof. Miroshnikov K., Prof. Shumyantseva V.

- 16.45 Likhtenstein Gerz, Russian Federation  
Orbital Factors Affected on Electron Transfer and Light Energy Conversion in Photoenzymes and Model Systems: A Connection between Spin Exchange and Electron Transfer
- 17.05 Dokudovskaya Svetlana, France  
Regulation of mTORC1 pathway
- 17.25 Bacheva Anna, Russian Federation  
Non-protein effectors of the proteasome
- 17.45 Gromova Elizaveta, Russian Federation  
Functional role of DNMT3a DNA methyltransferase mutations observed in acute myeloid leukemia
- 18.05 Rao Desirazu, India  
Deciphering the functional requirement of Zinc finger motif(s) in *Helicobacter pylori* Topoisomerase I catalysis
- 18.25 Kubareva Elena, Russian Federation  
Bacterial DNA-mismatch repair endonucleases MutL: structure and interaction with molecular partners

## Hall 1

Chair persons: Prof. Varfolomeev S., Prof. Gabibov A., Prof. Tishkov V.

- 19.00 Conference Closing

# Posters

June 25.

Upper desk.

20.10. Poster session 1

- 1 Abisheva Aleksandra, Russian Federation  
Minichaperone-based fusion system for stabilization of hydrophobic proteins in stably soluble forms
- 2 Abrosimova Ludmila, Russian Federation  
Studying the interaction of nicking endonuclease BspD6I and its variants with DNA
- 3 Aguilar Cristobal, Mexico  
Analysis of an ellagitannin-degrading enzyme produced by *Aspergillus niger* GH1
- 4 Baldin Semen, Russian Federation  
Modeling of substrate binding with L,D-transpeptidase 2 from *Mycobacterium tuberculosis* by advanced metadynamics
- 5 Baranova Margarita, Russian Federation  
Formation kinetics of MHC1-peptide-TCR tree-molecular complexes associated with HIV-1
- 6 Bykov Valery, Russian Federation  
The basic kinetic model of the oscillations in biocatalytic processes.
- 7 Drobot V.V, Russian Federation  
Molecular modeling of penicillin acylase mutant with increased specificity to bromoacetamide as acyl donor
- 8 Gabdulkhakov Azat, Russian Federation  
In search of transport network to trinuclear copper centre of two-domain laccases
- 9 Kirilin Evgeny, Russian Federation  
Catalytic processing of human type receptors by H5N1 Influenza neuraminidase using molecular modeling
- 10 Koltover Vitaly, Russian Federation  
Nuclear spin catalysis in biomolecular motors: premises and promises
- 11 Kovalevskii Rostislav, Russian Federation  
Effects of N-terminus structure on stability and catalytic properties of formate dehydrogenase from yeast *Ogataea parapolymorpha*
- 12 Krukova Maria, Russian Federation  
Structural and functional characterization of a new member of the HSL family from Siberian permafrost microbial community
- 13 Kulikova Olga, Russian Federation  
CopC from *Thioalkalivibrio paradoxus* as a copper chaperone for thiocyanate dehydrogenase
- 14 Mokrushina Yuliana, Russian Federation  
Antibody-based biocatalysts: how to predict selectivity and improve reactivity toward organophosphorus compounds
- 15 Mustakhimov Ildar, Russian Federation  
The ectoine degradation pathway in halotolerant methanotrophs
- 16 Mustakhimov Ildar, Russian Federation  
The amino acid substitutions in NADPH preferring acrylyl-CoA reductase Acul shift the enzyme specificity toward NADH
- 17 Nemtseva Elena, Russian Federation  
Structure and function of two types of bacterial luciferase
- 18 Podshivalov David, Russian Federation  
Investigating dynamic characteristics of the binding pocket in the influenza hemagglutinin
- 19 Pometun Anastasiya, Russian Federation  
Fusion enzymes based on monooxygenases with internal cofactor regeneration
- 20 Savin Svyatoslav, Russian Federation  
Structural studies of formate dehydrogenases
- 21 Shaposhnikov Leonid, Russian Federation  
Role of Cys230 in thermal and chemical stability of formate dehydrogenase from yeast *Ogataea parapolymorpha*

- 22 Shipkov Nikolai, Russian Federation  
Preliminary characterization of two novel thiocyanate dehydrogenases from halophilic sulfur oxidizing Gammaproteobacteria *Thiohalobacter thiocyanaticus* HRh1T and *Guyparkeria* sp. SCN-R1.
- 23 Varfolomeeva Larisa, Russian Federation  
Crystallization and structure analysis of the mutant forms of thiocyanate dehydrogenase from *Thioalkalivibrio paradoxus*
- 24 Varizuk (Kulikova) Irina, Russian Federation  
Nucleoside phosphorylases for preparation of biologically active nucleosides. Search of optimal substrates.
- 25 Yurcehnko Tatyana, Russian Federation  
Study of structure and function of bacterial formate dehydrogenase
- 26 Zenin Vladimir, Russian Federation  
Apical domain of thermophilic chaperone as stabilizing fusion partner
- 27 Belova Alla, Russian Federation  
Linoleic acid obtaining from safflower oil by lipases from different sources
- 28 Chertova Natalia, Russian Federation  
Development of the phospholipase A2 recombinant enzyme technology for the food industry
- 29 Iliina Anna, Mexico  
Enhancement of ethanol and sensorial compounds production from cane molasses by manganese ferrite and co-culture use
- 30 Khusnutdinova Anna, Canada  
Novel enzymes for biosynthesis and biotransformation of adipic acid
- 31 Lavrov Konstantin, Russian Federation  
Фундаментальные технологии биокаталитического получения акриловых мономеров
- 32 Morozova Irina, Russian Federation  
Penicillin acylase in chemoenzymatic synthesis of peptidomimetics
- 33 Nikulin Maksim, Russian Federation  
Search for biocatalysts of polydepsipeptide synthesis
- 34 Shora Hamed, Egypt  
immobilization and application of purified fungal chitinase
- 35 Sineriz Faustino, Argentina  
Biocatalysts. Hydrolases Production
- 36 Sinitsyna Olga, Russian Federation  
Novel Recombinant Phytase Preparation obtained by *Penicillium* sp.
- 37 Zaitseva Elena, Russian Federation  
Biocatalytic synthesis of the conducting copolymer of aniline and 2-aminophenethyl alcohol using a laccase-mediator system
- 38 Zaitseva Elena, Russian Federation  
Biocatalytic synthesis of conducting polyaniline for development of effective coatings against corrosion and static electricity
- 39 Zaitseva Elena, Russian Federation  
Biocatalytic synthesis of conducting poly(3,4-ethylenedioxythiophene) using "soft" natural template DNA

## **June 26.**

### **Upper desk**

#### **20.10 Poster session 2**

- 1 Gladchenko Marina, Russian Federation  
The application of physico-chemical and biological methods to suppress the processes of gas generation in grounds
- 2 Maksimova Yuliana, Russian Federation  
Heterogeneous and homogeneous biocatalysts for the biodegradation of nitriles and acrylamide
- 3 Polivtseva Valentina, Russian Federation  
New Soil Strains-Destructors of Phenol

- 4 Brenner Polina, Russian Federation  
Association of polymorphic markers of TP53 and CDKN1A genes with the progression free survival of ovarian cancer patients after platinum-based chemotherapy
- 5 Maksimenko Aleksander, Russian Federation  
Inactivating and stabilizing effects of glycosaminoglycan ligands during molecular docking of hyaluronidase
- 6 Muronetz Vladimir, Russian Federation  
Role of glycation and glycolysis in the induction of neurodegenerative amyloid diseases.
- 7 Neganova Margarita, Russian Federation  
Cyclic hydroxamic acids as effective inhibitors of histone deacetylases
- 8 Zueva Irina, Russian Federation  
Novel acetylcholinesterase inhibitors based on 6-methyluracil moiety for Alzheimer's disease treatment
- 9 Zueva Irina, Russian Federation  
A trifluoroketone, slow-binding inhibitor of human acetylcholinesterase, acting as a transition state analog of acetylcholine
- 10 Kapralova Maria, Russian Federation  
The relationship of polymorphic markers of XRCC1 and ERCC2 genes with the progression free survival of ovarian cancer patients after platinum-based chemotherapy
- 11 Lomakina Galina, Russian Federation  
Bioluminescent indication of the temperature stress on prokaryotic cells
- 12 Maloshitskaya Olga, Russian Federation  
A mass spectrometric study of sphingolipids, biomarkers of amyotrophic lateral sclerosis
- 13 Solovyev Ilya, Russian Federation  
FCS and FLIM methods combination for caspase-3 FRET sensor
- 14 Ugarova Natalia, Russian Federation  
Cell membrane permeability and integrity monitoring using firefly luciferase bioluminescent system
- 15 Abakumov Maksim, Russian Federation  
Magnetic nanoparticles in cancer therapy and diagnostics
- 16 Durmanov Nikolai, Russian Federation  
The application of porous silver surfaces and nanoparticles in virus detection and identification via SERS
- 17 Kolmogorov Vasiliy, Russian Federation  
The effects of Paclitaxel, Cytochalasin-D, Progerin on cancer cell compartments studied by elastic modulus measurement via Scanning Ion-Conductance Microscopy
- 18 Konyakhina Appolinaria, Russian Federation  
Nanocomposites based on carbon nanotubes and amphiphilic diblock copolymers: preparation and prospects of application as biosensor coatings
- 19 Korotkova Anastasia, Russian Federation  
Green synthesis nanoparticles of metal oxide in water extract of parsley
- 20 Le-Deygen Irina, Russian Federation  
Study of magnetic field parameters influence on exosomal membrane fluidity in complexes with magnetic nanorods by fluorescent spectroscopy
- 21 Orlova Marina, Russian Federation  
Nanomaterials based on hydroxyapatite and carboxycellulose for drug delivery
- 22 Usvaliev Azizbek, Russian Federation  
Bacteriophage endolysins: effect of magnetic field in the presence of magnetic nanorods on the lysis of *E. coli* cell wall
- 23 Vaneev A., Russian Federation  
Superoxide dismutase nanoparticles for the treatment of inflammatory eye diseases
- 24 Vanzarakshaeva Saruna, Russian Federation  
The development of magnetic liposomes-based nanoparticles iron oxide with different anisomeria
- 25 Veselov Maxim, Russian Federation  
Aggregation of hybrid magnetite-gold nanoparticles modified with enzyme and inhibitor under low-frequency magnetic field