

**TENTATIVE SCIENTIFIC PROGRAMME  
OF 12<sup>th</sup> INTERNATIONAL CONFERENCE  
“BIOCATALYSIS. FUNDAMENTALS & APPLICATIONS”  
“BIOCATALYSIS-2019”  
St.-Petersburg, June 24-28, 2019**

**Organizational and program committees  
"Biocatalysis-2019"**

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*Vice-Chairman:* Prof. Kurochkin Ilya N.

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Prof. Klyachko Natalia L.  
Prof. Ugarova Natalya N.  
Dr. Belogurov Alexey A.  
Dr. Savin Svyatoslav S.

**Co-symposium «Extremophiles and Extremozymes»**

*Chairman:* Prof. Elizaveta B-Osmolovskaya

## General Schedule of the Conference

### June 24, Monday

- 13.00 Participants arriving
- 16.00 Registration
- 18.30 **Varfolomeev Sergey**
- 19.15. Department of Chemical Enzymology  
- 45 years of history and achievements
- 19.15. **Kalujny Sergey**
- 19.45 RUSNANO: Fostering a new industry
- 20.00 Departure from St.Petersburg

### 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
- 14.30 **Nobel Prize lecture**
- 15.00 **ARIEH WARSHEL**
- 15.30 **How to use computer modeling in exploring biocatalysts?**
- Plenary lectures**
- 15.00 **Gabibov Alexander**
- 15.30 Novel approaches for screening biodiversity
- 15.30 **Bonch-Osmolovskaya Elizaveta**
- 16.00 New thermophilic prokaryotes, new metabolic pathways
- 16.00 **Wohlgemuth Roland**
- 16.30 New thermophilic prokaryotes, new metabolic pathways
- 16.30 **Coffee break**
- 17.00 **Sessions Main Hall, Hall 2 and Hall 3.**
- 19.00
- 19.00 Dinner
- 20.00
- 20.10 Young Scientists section. Round Table
- 21.10
- 21.10 Round table "BioCh imMac -30 years. Traditions, Experience, Innovations"

## **June 26, Wednesday**

- 7.00- Breakfast  
8.00  
8.30 **Main Hall. Upper Desk**  
Plenary lectures  
8.30 **Varfolomeev Sergey**  
9.00 Neuroenzymology: kinetics of biocatalytical reactions in human brain  
**Masson Patrick**  
9.00 Memories to Prof. Nikolckiy  
9.30 Competing substrate kinetics for michaelian enzymes and for enzymes showing activation/inhibition by excess substrate: application to kinetic analysis of cholinesterases  
9.30 **Tishkov Vladimir**  
10.00 New biocatalysts for processes of fine organic and chiral synthesis with oxidoreductases  
10.00 **Švedas Vytas**  
10.30 Knowledge-based modulation of enzyme functional properties  
  
10.30 **Coffee break**  
11.00  
**11.00 Sessions Main Hall, Hall 2 and Hall 3.**  
**13.00**  
**13.00 Lunch**  
**14.00**  
**14.15 Sessions. Main Hall, Upper Desk**  
Plenary lectures  
14.15 **Savitsky Alexander**  
14.45 Development of new enzyme mechanisms of animal antiviral resistance using African swine fever virus model  
14.45 **Nemukhin Alexander**  
15.15 Diversity of mechanisms in enzyme-catalyzed phosphorus-oxygen bond cleavage reactions  
15.15 **Ugarova Natalya**  
15.45 The emitter as an intramolecular probe in the luciferase active center  
  
16.00 **Excursion Kizhy**  
  
20.00  
20.00 Dinner  
21.00  
21.15 Seminar.  
22.00 How to write papers

## **June 27, Thursday**

- 7.00- Breakfast  
8.00  
8.30 Main Hall. Upper Desk  
Plenary lectures  
8.30 **Bronich Tatyana**  
9.00 Nanotechnology platforms in cancer therapy  
9.00 **Kurochkin Ilya**  
9.30 Highly sensitive bioanalytical systems based on plasmonic and polymer nanocomposites  
9.30 **Deev Sergey**  
10.00 Smart nanomaterials for biomedical application  
10.00 **Klyachko Nataliya**  
10.30 Tripeptidyl-peptidase 1 entrapment into extracellular vesicles enhances brain delivery and distribution in the animal model of batten disease  
10.30 **Coffee break**  
11.00  
11.00 **Sessions Main Hall, Hall 2 and Hall 3.**  
13.00  
13.00 Lunch  
14.00  
14.15 **Sessions. Main Hall, Upper Desl**  
16.15  
14.15 **Sessions Hall 2**  
16.15  
14.15 **Sessions Hall 3**  
16.15  
16.15 **Coffee break**  
16.45 **Sessions Main Hall, Hall 2 and Hall 3.**  
18.30  
18.40 Main Hall Upper Desl. Conference Closing  
  
19.00 **Dinner**

## **June 28, Friday**

- 7.00- Breakfast  
8.00  
9.00 Arrival to St.Petersburg

## Sections Schedule

**June 25**

**Hall 1**

**Upper Desk**

14.15	<b>Conference opening</b>			
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**Noble prize Lecture**

14.30	Warshel	Arieh	United States	"How to use computer modeling in exploring biocatalysts?"
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**Plenary Lectures**

15.00	Gabibov	Aleksander	Russian Federation	Novel approaches for screening biodiversity
	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

**Fundamental Biocatalysis 1**

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	Russian Federation	Genetic, biochemical and physiological characterization of novel D-amino acid oxidases from <i>Ogataea parapolymorpha</i> DL-1
18.00	Muroneta	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 ( <i>Armoracia rusticana</i> ) roots with red light additional irradiation under conditions of aeroponic phytotron

**Hall 2**

**Medicine 1**

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**

**Analytical aspects 1**

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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	Ugarova	Natalya	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

## June 26

### Hall 1

<b>Plenary</b>		<b>Lectures</b>		
8.30	Varfolomeev	Sergey	Russian Federation	Neuroenzymology: kinetics of biocatalytical reactions in human brain
9.00	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
9.30	Tishkov	Vladimir	Russian Federation	New biocatalysts for processes of fine organic and chiral synthesis with oxidoreductases
10.00	Švedas	Vytas	Russian Federation	Knowledge-based modulation of enzyme functional properties

<b>Structural aspects</b>				
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

<b>Applied</b>		<b>Biocatalysis</b>		
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 Monoxygenases XanO4 Catalyzes Cyclic Ether Formation
12.35	Atroshenko	Denis	Russian Federation	Multipoint mutants of TvDAAO with improved catalytic properties and stability

### Hall 3

<b>Analytical</b>		<b>aspects 2</b>		
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	Vasilieva	Aleksandra	Russian Federation	Applying the HPLC-MS / MS method to identify and quantify oxidative post-translational modifications of proteins
12.20	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
12.40	Tyubaeva	Polina	Russian Federation	Biopolymer nanofibrous materials for tissue engineering and medicine

### Hall 1

#### Upper Desk

<b>Plenary</b>		<b>Lectures</b>		
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	Natalya	Russian Federation	The emitter as an intramolecular probe in the luciferase active center

## June 27

<b>Hall 1</b>				
<b>Plenary</b>		<b>Lectures</b>		
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	Tripeptidyl-peptidase 1 entrapment into extracellular vesicles enhances brain delivery and distribution in the animal model of batten disease

<b>Nanotechnology 1</b>				
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

### Bioinformatics and Computer Modeling

11.00	Hayashi	Hideyuki	Japan	Quantum-chemical analysis of the catalytic reaction of aspartate aminotransferase
11.20	Sokalski	Waclaw	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	Mokrushina	Yuliana	Russian Federation	Antibody-based biocatalysts: how to predict selectivity and improve reactivity toward organophosphorus compounds.
12.20	Zlobin	Aleksandr	Russian Federation	Towards application of deep convolutional neural networks to enzyme design
12.40	Zalevsky	Artur	Russian Federation	Unraveling Na <sup>+</sup> dependent thrombin activation with large-scale QM/MM simulations

## Hall 1

### Extremophiles

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	Gavrilov	Sergey	Russian Federation	Novel determinants of extracellular electron transfer underlying exoelectrogenesis and biogenic crystallization of magnetite in a thermophilic bacterium <i>Carboxydothemus ferrireducens</i>
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

### Nanotechnology 2

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	Abakumov	Maksim	Russian Federation	Magnetic nanoparticles in cancer therapy and diagnostics
15.35	Vlasova	Kseniya	Russian Federation	Magnetic liposome responsive to super-low frequency alternating magnetic field
15.55	Nechaeva	Natalia	Russian Federation	Surface-Enhanced Raman Spectroscopy in Glycated Albumin Detection



**Hall 1**

<b>Medicine 2</b>				
16.45	Egorov	Aleksey	Russian Federation	Beta-lactamases - drivers of bacterial antibiotic resistance
17.05	Trudil	David	USA	Use of Bacteriophage and lytic enzymes for the detection, treatment and prevention of bacterial infections
17.25	Maksimenko	Aleksander	Russian Federation	New challenges of contemporary healthcare. Enzyme derivatives of combined action and conjunctive courses of biocatalysts
17.45	Klochkov	Sergey	Russian Federation	Natural scaffolds as modulators of farnesyltransferase activity
18.05	Yakovlev	Aleksey	Russian Federation	<sup>1</sup> H NMR in vivo study of inhibitory neurotransmitter impact to human brain in videostimulation
18.25	Filatova	Lubov	Russian Federation	Interaction of lysozyme with mucoadhesive polymers

**Hall 2**

<b>Fundamental aspects 2</b>				
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**

18.50	<b>Conference Closing</b>			
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# Posters

## Fundamental

## Biocatalysis

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 <i>Aspergillus niger</i> GH1
4	Baldin	Semen	Russian Federation	Modeling of substrate binding with L,D-transpeptidase 2 from <i>Mycobacterium tuberculosis</i> by advanced metadynamics
5	Baranova	Margarita	Russian Federation	Formation kinetics of MHC1-peptide-TCR tree-molecular complexes associated with HIV-1
6	Drobot	V.V	Russian Federation	Molecular modeling of penicillin acylase mutant with increased specificity to bromoacetamide as acyl donor
7	Gabdulkhakov	Azat	Russian Federation	In search of transport network to trinuclear copper centre of two-domain laccases
8	Kirilin	Evgeny		Catalytic processing of human type receptors by H5N1 Influenza neuraminidase using molecular modeling
9	Koltover	Vitaly	Russian Federation	Nuclear spin catalysis in biomolecular motors: premises and promises
10	Kovalevskii	Rostislav	Russian Federation	Effects of N-terminus structure on stability and catalytic properties of formate dehydrogenase from yeast <i>Ogataea parapolymorpha</i>
11	Krukova	Maria	Russian Federation	Structural and functional characterization of a new member of the HSL family from Siberian permafrost microbial community
12	Kulikova	Olga	Russian Federation	CopC from <i>Thioalkalivibrio paradoxus</i> as a copper chaperone for thiocyanate dehydrogenase
13	Mikoulinskaia	Galina	Russian Federation	L,D-peptidases of coliphages: structure, properties, regulation and biotechnological potential
14	Mustakhimov	Ildar	Russian Federation	The amino acid substitutions in NADPH preferring acrylyl-CoA reductase Acul shift the enzyme specificity toward NADH
15	Mustakhimov	Ildar	Russian Federation	The ectoine degradation pathway in halotolerant methanotrophs
16	Nemtseva	Elena	Russian Federation	Structure and function of two types of bacterial luciferase
17	Podshivalov	David	Russian Federation	Investigating dynamic characteristics of the binding pocket in the influenza hemagglutinin
18	Pometun	Anastasiya	Russian Federation	Fusion enzymes based on monooxygenases with internal cofactor regeneration
19	Savin	Svyatoslav	Russian Federation	Structural studies of formate dehydrogenases
20	Shaposhnikov	Leonid	Russian Federation	Role of Cys residue in thermal and chemical stability of formate dehydrogenase from yeast <i>Ogataea parapolymorpha</i>
21	Shipkov	Nikolai	Russian Federation	Preliminary characterization of two novel thiocyanate dehydrogenases from halophilic sulfur oxidizing Gammaproteobacteria <i>Thiohalobacter thiocyanaticus</i> HRh1T and <i>Guyarkeria</i> sp. SCN-R1.
22	Varfolomeeva	Larisa	Russian Federation	Crystallization and structure analysis of the mutant forms of thiocyanate dehydrogenase from <i>Thioalkalivibrio paradoxus</i>
23	Varizuk (Kulikova)	Irina	Russian Federation	Nucleoside phosphorylases for preparation of biologically active nucleosides. Search of optimal substrates.
24	Zenin	Vladimir	Russian Federation	Apical domain of thermophilic chaperone as stabilizing fusion partner

## Applied

## Biocatalysis

1	Belova	Alla	Russian Federation	Linoleic acid obtaining from safflower oil by lipases from different sources
2	Chertova	Natalia	Russian Federation	Development of the phospholipase A2 recombinant enzyme technology for the food industry
3	Irina	Anna	Mexico	Enhancement of ethanol and sensorial compounds production from cane molasses by manganese ferrite and co-culture use
4	Khusnutdinova	Anna	Canada	Novel enzymes for biosynthesis and biotransformation of adipic acid
5	Lavrov	Konstantin	Russian Federation	Фундаментальные технологии биокаталитического получения акриловых мономеров
6	Morozova	Irina	Russian Federation	Penicillin acylase in chemoenzymatic synthesis of peptidomimetics
7	Nikulin	Maksim	Russian Federation	Search for biocatalysts of polydepsipeptide synthesis
8	Shora	Hamed	Египет	immobilization and application of purified fungal chitinase

9	Sineriz	Faustino	Argentina	Biocatalysts. Hydrolases Production
10	Sinitsyna	Olga	Russian Federation	Novel Recombinant Phytase Preparation obtained by <i>Penicillium</i> sp.
11	Zaitseva	Elena	Russian Federation	Biocatalytic synthesis of the conducting copolymer of aniline and 2-aminophenethyl alcohol using a laccase-mediator system
12	Zaitseva	Elena	Russian Federation	Biocatalytic synthesis of conducting polyaniline for development of effective coatings against corrosion and static electricity
13	Zaitseva	Elena	Russian Federation	Biocatalytic synthesis of conducting poly(3,4-ethylenedioxythiophene) using "soft" natural template DNA

### Environment

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

### Medicine

1	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
2	Maksimenko	Aleksander	Russian Federation	Inactivating and stabilizing effects of glycosaminoglycan ligands during molecular docking of hyaluronidase
3	Muronetz	Vladimir	Russian Federation	Role of glycation and glycolysis in the induction of neurodegenerative amyloid diseases.
4	Neganova	Margarita	Russian Federation	Cyclic hydroxamic acids as effective inhibitors of histone deacetylases
5	Orlova	Marina	Russian Federation	Nanomaterials based on hydroxyapatite and carboxycellulose for drug delivery
6	Zueva	Irina	Russian Federation	Novel acetylcholinesterase inhibitors based on 6-methyluracil moiety for Alzheimer's disease treatment

### Analytics

1	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
2	Lomakina	Galina	Russian Federation	Bioluminescent indication of the temperature stress on prokaryotic cells
3	Maloshitskaya	Olga	Russian Federation	A mass spectrometric study of sphingolipids, biomarkers of amyotrophic lateral sclerosis
4	Solovyev	Ilya	Russian Federation	FCS and FLIM methods combination for caspase-3 FRET sensor

### Nano

1	Durmanov	Nikolai	Russian Federation	The application of porous silver surfaces and nanoparticles in virus detection and identification via SERS
2	Klyachko	Natalia	Russian Federation	The effects of Paclitaxel, Cytochalasin-D, Progerin on cancer cell compartments studied by elastic modulus measurement via Scanning Ion-Conductance Microscopy
3	Konyakhina	Appolinaria	Russian Federation	Nanocomposites based on carbon nanotubes and amphiphilic diblock copolymers: preparation and prospects of application as biosensor coatings
4	Korotkova	Anastasia	Russian Federation	Study of magnetic field parameters influence on exosomal membrane fluidity in complexes with magnetic nanorods by fluorescent spectroscopy
5	Le-Deygen	Irina	Russian Federation	Study of magnetic field parameters influence on exosomal membrane fluidity in complexes with magnetic nanorods by fluorescent spectroscopy
6	Skuredina	Anna	Russian Federation	The development of a fluoroquinolone delivery system with improved pharmacokinetic characteristics using $\beta$ -cyclodextrin derivatives
7	Tyubaeva	Polina	Russian Federation	Biopolymer nanofibrous materials for tissue engineering and medicine
8	Usvaliev	Azizbek	Russian Federation	Bacteriophage endolysins: effect of magnetic field in the presence of magnetic nanorods on the lysis of <i>E. coli</i> cell wall
9	Vaneev	A.	Russian Federation	Superoxide dismutase nanoparticles for the treatment of inflammatory eye diseases
10	Vanzarakshaeva	Saruna	Russian Federation	The development of magnetic liposomes-based nanoparticles iron oxide with different anisomeria
11	Veselov	Maxim	Russian Federation	Aggregation of hybrid magnetite-gold nanoparticles modified with enzyme and inhibitor under low-frequency magnetic field