BIONANOTOX 2017

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8th INTERNATIONAL CONFERENCE

"BIOMATERIALS AND NANOBIOMATERIALS:

Recent Advances Safety-Toxicology And Ecology Issues"

Including Russian-Hellenic Workshop And School Of Young Scientists

07-14 MAY, 2017, AGAPI BEACH, HERAKLION, CRETE - GREECE

SCIENTIFIC PROGRAM

SUNDAY, MAY 7, 2017

ARRIVAL - REGISTRATION

20:00 *WELCOME COCKTAIL*

MONDAY, MAY 8, 2017

08:00-09:30 *BREAKFAST*

10:00 **OPENING CEREMONY**

10:00-10:10 **WELCOME ADDRESS**

Aristidis M. Tsatsakis, Co-head of Organizing Committee

University of Crete, Iraklion, Crete, Greece

10:10-10:20 **ABOUT SYMPOSIUM PROGRAM**

Mikhail I. Shtilman, Co-head of Organizing Committee

D. Mendeleyev, University of Chemical Technology of Russia, Moscow, Russia

10:20-11:00 **WHAT PROPERTIES ARE REQUIRED FOR NANOPREPARATIONS TO BECOME AN EFFECTIVE ANTICANCER MEDICINE?**

Vladimir P. Torchilin, President of Conference

Center for Pharmaceutical Biotechnology and Nanomedicine, North-Eastern University, Boston, MA 02115, USA

11:00-11:30 *COFFEE BREAK, POSTER SESSION*

11:30-12:30 **MORNING SESSION**

Chairs: Prof. V. P. Totchilin, Prof. Yu. A. Vladimirov

11:30-12:10 **CHALLENGES FOR TOXICOLOGY AND RISK ANALYSIS OF BIONANOMATERIALS IN THE 21 CENTURY**

Aristidis M. Tsatsakis

Department of Toxicology & Forensic Science, Medical School, University of Crete, Voutes Campus, Heraklion 71003

12:10-12:50 **BIOMEDICAL APPLICATION OF NANO-SIZED POLYION COMPLEXES**

A. V. Kabanov[1,2]

[1] University of North Carolina at Chapel Hill, 125 Mason Farm Road Chapel Hill, NC 27599- 7362 USA
[2] M. V. Lomonosov Moscow State University, Moscow 117298, Russian Federation

13:00-14:00 *LUNCH*

14:00-16:30 *BREAK*

16:30-18:00 **EVENING SESSION**

Chairs: Prof N. L. Klyachko, Prof. S. A. Eremin

16:30-17:00 **STYRENE-BUTYL ACRYLATE COPOLYMERS AS NOVEL PRESSURE SENSITIVE ADHESIVES FOR SKIN APPLICATION**

A. A. Shcherbina[1], Yu. G. Bogdanova[2], T. I. Chalykh[1]

[1] Plekhanov Russian University of Economics, Moscow, Russia
[2] Lomonosov Moscow State University, Moscow, Russia

17:00-17:30 **EXTREMELY LOW MAGNETIC FIELD AS A PERSPECTIVE ALTERNATIVE FOR MEMBRANE MICROVISCOSITY REGULATION**

I. M. Le-Deygen[1], E. O. Kutsenok[1], M. V. Efremova[1,2], P. G. Rudakovskaya [1,2], A. G. Majouga[1,2], Yu. I. Golovin [1,3], S. L. Gribanovsky [3], A. O. Ghigachev [3], I. A. Boldyrev [4], E. L. Vodovozova [4], E. V. Kudryashova [1], A. V. Kabanov [1,5], N. L. Klyachko [1,2,5]

[1] M. V. Lomonosov Moscow State University, Moscow, Russia
[2] National University of Science and Technology "MISIS" (MISIS), Moscow, Russia
[3] G. R. Derzhavin Tambov State University, Tambov, Russia
[4] Institute of Bioorganic Chemistry RAS, Moscow, Russia
[5] University of North Carolina, Chapel Hill, NC, USA

17:30-18:00 **DEVELOPMENT OF LIPOSOMES FOR TARGETED CISPLATIN DELIVERY TO GLIOMA CELLS**

I. I. Kuznetsov[1,2], S. A. Shein[1], T. O. Abakumova[1], A. A. Korchagina[1], P. A. Melnikov[1], P. S. Chelushkin[3], D. A. Bychkov[2], A. V. Kabanov[2,4], N. V. Nukolova[1], V. P. Chekhonin[1], N. L. Klyachko[2]

[1] *Department of Fundamental and Applied Neurobiology, Serbsky Medical Research Center of Psychiatry and Narcology, Moscow, Russia*
[2] *Department of Chemistry, Lomonosov Moscow State University, Moscow, Russia*
[3] *Institute of Chemistry, St. Petersburg State University, St. Petersburg, Russia*
[4] *Center for Nanotechnology in Drug Delivery, Molecular Pharmaceutics Division, UNC Eshelman School of Pharmacy, Chapel Hill, USA*
[5] *Skolkovo Institute of Science and Technology, Moscow, Russia*

18:00-18:50 **ROUND TABLE WORKSHOP: ERA. NET PROJECT "NABUKO"**

19:00-20:00 *DINNER*

TUESDAY, MAY 9, 2017

08:00-09:15 *BREAKFAST*

09:30-13:00 **MORNING SESSION**

Chairs: Prof. A. V. Kabanov, Prof. M. A. Ostrovskii

09:30-10:00 **LIPOFUSCIN GRANULES OF THE EYE RETINAL PIGMENT EPITHELIUM: SOURCE OF THE RADICALS AND AUTOFLUORESCENCE**

M. A. Ostrovskii
Institute of Biochemical Physics, Russian Academy of Sciences, Russia

10:00-10:30 **NANOCOMPLEX OF CYTOCHROME C WITH CARDIOLIPIN: STRUCTURE, CATALYTIC PROPERTIS, AND ANTICANCER PERSPECTIVES**

Yu. A. Vladimirov, G. K. Vladimirov, N. M. Polimova
Lomonosov Moscow State University, Moscow, Russia

10:30-11:00 **EXOSOMES AS NATURAL NANOSIZED CARRIERS FOR DRUG DELIVERY**

N. L. Klyachko[1,2], M. J. Haney[1], Y. Zhao[1], M. Sokolsky[1], A. V. Kabanov[1], E. V. Batrakova[1]
[1] *University of North Carolina, Chapel Hill, NC, USA*
[2] *M. V. Lomonosov Moscow State University, Moscow, Russia*

11:00-11:30 *COFFEE BREAK, POSTER SESSION*

Chairs: Prof. N. P. Kildeeva, Prof. S. N. Mikhailov

11:30-12:00 **"INDIVIDUAL PROFILING": NANOPARTICLE'S BLOOD-BRAIN BARRIER PASSAGE AND TISSUE DISTRIBUTION CHARACTERISED BY IN VIVO IMAGING**

P. Henrich-Noack[1], E. Zhang[1], M. Tawfik[1]. M. Sokolov[1], Q. You[1], W. Hintz[2], T. Hopf[2], S. Gelperina[3], N. Osipova[3], O. Maksimenko[3], M. Shtilman[4], A. N. Kuskov[4], P. P. Kulikov[4], A. Tsatsakis[5], P. Stivaktakis[5], S. Hadllak[6], C. Götze[6], B. A. Sabel[1]
[1] *Institute of Medical Psychology, Otto-von-Guericke University, Magdeburg, Germany*
[2] *Instite of Process Engineering, Otto-von-Guericke University, Magdeburg, Germany*
[3] *Drug Technologies, Moscow, Russia*
[4] *Research-and-production Center Amphion Ltd, Moscow, Russia*
[5] *ToxPlus SA, Heraklion, Greece*
[6] *arivis AG, Unterschleißheim, Germany*

12:00-12:30 **NATURAL NANOSTRUCTURES (LIPOPROTEIDS OF BLOOD PLASMA) PLAY THE IMPORTANT ROLE IN THE DEVELOPMENT OF PATHOLOGICAL STATES**

V. Z. Lankin, A. K. Tikhaze
Russian Cardiology Research Complex, Moscow, Russia

12:30-13:00 **INTERACTION BACTERIA WITH NANO- AND MICROPARTICLES**

K. S. Golokhvast
Far Eastern Federal University, Vladivostok, Russia

13:00-14:00 *LUNCH*

14:00-19:00 *BREAK*

19:00-20:00 *DINNER*

WEDNESDAY, MAY 10, 2017

08:00-09:30 *BREAKFAST*

09:30-13:00 **MORNING SESSION**

Chairs: Prof. V. Z. Lankin, Prof. V. N. Rakitskii

09:30-10:00 **GENE AND CELL APPROACHES IN REGENERATIVE MEDICINE**

P. I. Makarevich[1,2], Ye. V. Parfyonova[2,3], V. A. Tkachuk[1,3]

[1]Institute of Regenerative Medicine, Lomonosov Moscow State University, Moscow, Russia
[2]Russian Cardiology Research and Production Complex, Moscow, Russia
[3]Faculty of Medicine, Lomonosov Moscow State University, Moscow, Russia

10:00-10:30 **BIOCOMPATIBLE FILMS AND POROUS SCAFFOLDS BASED ON CHITOSAN CROSS-LINKED WITH GENIPIN OR GLUTARALDEHYDE**

N. R. Kildeeva[1], M. A. Kasatkina[1], M. G. Drozdova[3], T. S. Demina[2], S. A. Uspenskii[2], S. N. Mikhailov[4], E. A. Markvicheva[3]

[1]A. N. Kosygin Russian State University, Moscow, 117997 Sadovnicheskaya Str. 33(1), Russia
[2]Enikolopov Institute of Synthetic Polymer Materials, RAS, Moscow, Russia
[3]M. M. Shemyakin and Yu. A. Ovchinnikov Institute of Bioorganic Chemistry, RAS, Russia
[4]Engelhardt Institute of Molecular Biology, RAS, Moscow, Russia

10:30-11:00 **APPLICATION OF ENZYMES FOR THE PREPARATION OF BIOLOGICALLY ACTIVE NUCLEOSIDES**

S. N. Mikhailov

Engelhardt Institute of Molecular Biology, Russian Academy of Sciences, Moscow, 119991 Russia

11:00-11:30 **APPLICATION OF ECOLOGICALLY FRIENDLY POLYSACCHARIDE – GELLAN FOR ENHANCED OIL RECOVERY**

S. Kudaibergenov[1,2], I. Gussenov[1], B. Zhappasbayev[1], G. Kudaibergenova[2]

[1]Laboratory of Engineering Profile K. I. Satpayev Kazakh National Research Technical University, Almaty, Kazakhstan
[2]Institute of Polymer Materials and Technology, Almaty, Kazakhstan

11:30-12:00 *COFFEE BREAK, POSTER SESSION*

Chairs: Prof. S. Kudaibergenov, Prof. P. I. Makarevich

12:00-12:30 **BENEFIT-RISK RATIO OF INTAKE OF CANNED SAURY (*Cololabis saira*), CONTAINED ESSENTIAL FATTY ACIDS AND HEAVY METALS**

M. I. Gladyshev[1,2], O. V. Anishchenko [2], N. N. Sushchik[1,2], O. N. Makhutova[1,2], G. S. Kalachova [2], I. V. Gribovskaya [2], V. N. Morgun[3]

[1]Siberian Federal University, 79 Svobodny av. , Krasnoyarsk, 660041, Russia
[2]Institute of Biophysics SB RAS, Federal Research Center "Krasnoyarsk Science Center SB RAS", Akademgorodok, 50/50 Krasnoyarsk, 660036, Russia
[3]Federal Regional Center for Standardization, Metrology and Testing in the Krasnoyarsk Region, 1a Vavilov Str. , Krasnoyarsk, 660093, Russia

12:30-13:00 **PRODUCTION AND PROPERTIES OF BACTERIAL CELLULOSE BY THE NEW STRAIN OF ACETIC ACID BACTERIA *KOMAGATAEIBACTER XYLINUS* B-12068**

E. I. Shishatskaya, S. V. Prudnikova, I. P. Shidlovsky

Institute of Biophysics SB RAS, Federal Research Center "Krasnoyarsk Science Center SB RAS", Krasnoyarsk, Russia
Siberian Federal University. Institute of Fundamental Biology and Biotechnology, Krasnoyarsk, Russia

13:00-14:00 *LUNCH*

14:00-19:00 *BREAK*

17:30-20:30 **Satellite Symposium Lemberts**
Modern Views on Diet Supplements (only in Greek)

19:00-20:00 *DINNER*

THURSDAY, MAY 11, 2017

08:00-09:00 *BREAKFAST*

10:00-13:00 **MORNING SESSION**

Chairs: Prof. V. P. Varlamov, Prof. O. A. Legonkova

10:00-10:30 **INACTIVATION OF HEPARIN BY QUATERNIZED DERIVATIVES OF CHITOSAN**

B. Ts. Shagdarova[1], N. N. Drozd[2], A. V. Il'ina[1], Yu. S. Logvinova[2], A. A. Zubareva[1], V. P. Varlamov[1]
[1] Institute of Bioengineering, Research Center of Biotechnology of the Russian Academy of Sciences, Moscow, Russia
[2] National Research Center for Hematology, Ministry of Health, Moscow, Russia

10:30-11:00 **INVESTIGATION OF ANTISEPTICS ANTIMICROBIAL ACTIVITY AGAINST STAPHYLOCOCCUS EPIDERMIDIS**

O. A. Legonkova, R. P. Terehova, T. A. Ushakova, A. I. Korotaeva
State Organization «Institute of Surgery named after A. V. Vishnevsky», Russian Ministry of Health, Moscow, 117997, B. Serpukhovskaya, 27

11:00-11:30 **ECOTOXICOLOGICAL PROFILE OF LANTHANIDES**

I. Blinova[1], H. Vija[1], I. Kurvet[1], M. Muna[1], K. Juganson[1], E. Joonas[1], A. Lukjanova[1] and A. Kahru[1,2]
[1] Laboratory of Environmental Toxicology, National Institute of Chemical Physics and Biophysics, Tallinn, Estonia
[2] Estonian Academy of Sciences, Tallinn, Estonia

11:30-12:00 *COFFEE BREAK, POSTER SESSION*

Chairs: Prof. E. I. Shishatskay, Prof. M. I. Gladyshev

12:00-12:30 **SAFE USE OF ANTIMICROBIAL NANO-COATINGS FOR HIGH-TOUCH SURFACES IN HEALTH-CARE SETTINGS: EC COST ACTION NETWORK AMICI**

A. Kahru[1,2], M. Ahonen[3], A. Ivask[1], K. Kasemets[1], S. Kõljalg[4], P. Mantecca[5], I. Vinković Vrček[6], . M. Keinänen-Toivola[3] and F. Crijns[7]
[1] Laboratory of Environmental Toxicology, National Institute of Chemical Physics and Biophysics, Tallinn, Estonia
[2] Academy of Sciences, Tallinn, Estonia
[3] Satakunta University of Applied Sciences, Faculty of Technology, Rauma, Finland;
[4] Department of Microbiology, Institute of Biomedicine and Translational Medicine, University of Tartu, Tartu, Estonia;
[5] University of Milano-Bicocca, Department of Earth and Environmental Sciences, Research Centre POLARIS, Milan, Italy
[6] Institute for Medical Research and Occupational Health, Zagreb, Croatia
[7] Zuyd University of Applied Sciences, Dept. Bèta Sciences and Technology, Heerlen, The Netherlands

12:30-13:00 **ADVERSE EFFECT OF SILVER NANOPARTICLES TO THE MICROBIAL COMMUNITY OF WASTE-WATER TREATMENT PLANT**

K. Kasemets[1], S. Käosaar[1], J. Truu[2], A. Kahru[1]
[1] Laboratory of Environmental Toxicology, National Institute of Chemical Physics and Biophysics, Akadeemia tee 23, Tallinn 12618, Estonia
[2] University of Tartu, Ülikooli 18, Tartu 50090, Estonia

13:00-14:00 *LUNCH*

14:00-19:00 *BREAK*

19:00-20:00 *DINNER*

FRIDAY, MAY 12, 2017

08:00-09:00 *BREAKFAST*

09:30-11:30 **MORNING SESSION**

Chairs: Prof. Y. I. Golovin, Prof. E. A. Markvicheva

09:30-10:00 **POLYSACCHARIDE MICROCONTAINERS WITH A FUNCTIONALIZED SURFACE FOR THE DELIVERY OF LIPOPHILIC ANTICANCER DRUGS: PREPARATION AND *IN VITRO* STUDIES**

E. Y. Lysova[1,2], A. M. Gileva[1], R. A. Akasov[1,2], T. V. Bukreeva[2,3], T. N. Borodina[2], N. L. Klyacko[4] E. A. Markvicheva[1]

[1] *Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry RAS, Moscow, Russia*
[2] *Shubnikov Institute of Crystallography of Federal Scientific Research Centre "Crystallography and Photonics" of Russian Academy of Sciences, Moscow, Russia*
[3] *National Research Center «Kurchatov Institute», Moscow, Russia*
[4] *Moscow State University, Moscow, Russia*

10:00-10:30 **MAGNETIC NANOPARTICLES ACTUATED BY NON-HEATING LOW FREQUENCY MAGNETIC FIELDS AS THE MULTIMODAL TOOLS FOR NEW-GENERATION NANOMEDICINE**

Y. I. Golovin[1,2], S. L. Gribanovsky[2], D. Y. Golovin[2], A. O. Zhigachev[2], A. V. Shuklinov[2], M. V. Efremova[1], I. M. Deygen[1], K. Yu. Vlasova[1], M. M. Veselov[1], M. Sokolsky[4], A. V. Kabanov[1,4], A. G. Majouga[1,3], N. L. Klyachko[1,4]

[1] *Chemistry Faculty, M. V. Lomonosov Moscow State University, Moscow, Russia*
[2] *Nanocenter, G. R. Derzhavin Tambov State University, Tambov, Russia*
[3] *National Research Technological University MISIS, Moscow, Russia*
[4] *University of North Carolina at Chapel Hill, Chapel Hill, NC, USA*

10:30-11:00 **RECOMBINANT SUPEROXIDE DISMUTASE 1 INCORPORATED INTO POLYMERIC NANOPARTICLES FOR OPHTHALMIC APPLICATIONS**

N. L. Klyachko[1,5,6], A. D. Aleksashkin[1,5], A. N. Vaneev[2], E. A. Zaitseva[1], N. L. Eremeev[1], I. I. Nikol'skaya[1], P. V. Binevsky[1], O. V. Beznos[3], N. V. Nukolova[4], A. B. Belova[1], P. V. Gorelkin[5], A. V. Kabanov[1,6], N. B. Chesnokova[3], O. A. Kost[1]

[1] *Faculty of Chemistry, M. V. Lomonosov Moscow State University, Moscow, Russia*
[2] *Faculty of Material Sciences, M. V. Lomonosov Moscow State University, Moscow, Russia*
[3] *Helmholtz Moscow Research Institute of Eye Diseases, Moscow, Russia*
[4] *The Serbsky State Scientific Center for Social and Forensic Psychiatry, Moscow, Russia*
[5] *"Medical nanotechnologies" Ltd. Company, Moscow, Russia*
[6] *University of North Carolina, Chapel Hill, NC, USA*

11:00-11:30 **NEW IMMUNOASSAYS FOR DETECTION OF ORGANIC COMPOUNDS**

S. A. Eremin

M. V. Lomonosov Moscow State University, Faculty of Chemistry, Leninskie Goru 1, Moscow 119991, Russia

11:00-11:30 *BREAK*

CLOSING CEREMONY
Farewell Address – Closing Remarks

13. 00-14. 00 *LUNCH*

19. 00-22. 00 **Farewell Dinner**

SATURDAY, MAY 13, 2017

08. 00-09. 00 *BREAKFAST*

10. 00-13. 00 **Excursion**

13. 00-14. 00 *LUNCH*

19. 00-22. 00 *DINNER*

SUNDAY, MAY 14, 2017

08. 00-09. 00 *BREAKFAST*

DEPARTURE OF PARTICIPANTS

LIST OF POSTERS

P01
FLUORESCENT PROPERTIES OF THE DIL-LABELED PLGA NANOPARTICLES

V. Zhukova[1], N. Osipova[2], O. Maksimenko[2], Y. Ermolenko[1,2], P. Henrich-Noack[3], S. Gelperina[2]
[1] D. Mendeleev University of Chemistry and Technology of Russia, Moscow, Russia
[2] Drugs Technology LLC, Khimki, Russia
[3] Otto-von-Guericke-Universität, Magdeburg, Germany

P02
COMPARISON OF QUANTUM YIELDS OF Cy5. 5-LABELED PLGA NANOPARTICLES PREPARED BY VARIOUS TECHNIQUES

A. Semenkin[1,2], S. Mantrov[1,2], N. Osipova[1], O. Maksimenko[1], P. Henrich-Noack[3], S. Gelperina[1]
[1] Drugs Technology LLC, Khimki, Russia
[2] D. Mendeleev University of Chemistry and Technology of Russia
[3] Institute of Medical Psychology, Otto-von-Guericke University, Magdeburg, Germany

P03
EFFECTS OF CROSSLINKING CONDITIONS ON THE PROPERTIES OF HYALURONIC ACID HYDROGEL

N. R. Kildeeva[1], M. V. Maslova[1], T. S. Demina[2], S. A. Uspenskii[2]
[1] A. N. Kosygin Russian State University, Moscow, 117997 Sadovnicheskaya Str. 33(1), Russia
[2] Enikolopov Institute of Synthetic Polymer Materials, RAS, Moscow, Russia

P04
OPTIMIZATION OF WET DIGESTION METHODS FOR THE DETERMINATION OF SILVER NANOPARTICLES ON RICE (ORYZA SATIVA L. CV. KDML 105), STICKY RICE (ORYZA SATIVA VAR. GLUTINOSA CV. RD 6) AND CHINESE WATER CONVOLVULUS (IPOMOEA AQUATIC FORSK. VAR. REPTAN)

S. Srisung[1], J. Kunthup[1], N. Wasukan[1]
[1] Srinakarinwirot University, Bangkok, Thailand

P05
POLYMERIC NANOPARTICLES BASED ON AMPHIPHILIC PVP FOR DELIVERY OF ACTIVE SUBSTANCES INTO THE CELLS'S NUCLEI

A. L. Luss[1], P. P. Kulikov[1], S. B. Romme[2], C. P. Pennisi[3], A. V. Goryachaya[1], A. N. Kuskov[1], P. Fojan[2] L. Gurevich[2], M. I. Shtilman[1]
[1] D. Mendeleyev University of Chemical Technology of Russia, Moscow, Russian Federation
[2] Department of Physics and Nanotechnology, Aalborg University, Aalborg, Denmark
[3] Department of Health Science and Technology, Aalborg University, Aalborg, Denmark

P06
POLYMERIC DOUBLE-LAYER NANOPARTICLES BASED ON AMPHIPHILIC PVP FOR CONTROLLED RELEASE OF ACTIVE SUBSTANCES

A. L. Luss[1], P. P. Kulikov[1], A. V. Goryachaya[1], A. N. Kuskov[1], M. I. Shtilman[1]
[1] D. Mendeleyev University of Chemical Technology of Russia, Moscow, Russian Federation

P07
Oxidative dopamine and n-phenylglicine polymerization

Ya. O. Mezhuev, A. V. Varankin, M. I. Shtilman, Yu. V. Korshak, I. V. Grebennik, I. F. Snegurova, G. I. Kandelaki
D. Mendeleyev University of Chemical Technology of Russia

P08
MULTICELLULAR SPHEROIDS GENERATED FROM STEM CELLS BY RGD-INDUCED CELL SELF-ASSEMBLY FOR TISSUE ENGINEERING

R. Akasov[1], S. Burov[2], I. Chevalot[3], E. Guedon[3], E. Olmos[3], E. Markvicheva[1]
[1] Shemyakin-Ovchinnikov Institute of Bioorganic Chem. , Rus. Acad. Sci. , Miklukho-Maklaya Str 16/10, 117997, Moscow, Russia
[2] Institute of Macromolecular Compounds, Rus Acad Sci, Bolshoy pr. 31, 199004 St-Petersburg, Russia
[3] UMR CNRS 7274 Laboratoire Reactions et Genie des Procedes, University de Lorraine, 2 Avenue de la Foret Haye, 54518 Vandoeuvre-les-Nancy, France

P09
HYDROGEL ENZYMES-CONTAINING COMPOSITION FOR WOUND HEALING

E. E. Dosadina[1], N. S. Markvichev[1], L. L. Brkich[2], N. V. Pyatigorskaya[2], A. Y. Evdokimenko[1], E. E. Savelyeva[1], V. I. Panfilov[1], A. A. Belov[1]
[1] Mendeleev University of Chemical Technology of Russia, Department of Biotechnology,
[2] Institute of Pharmacy and Translational Medicine, I. M Sechenov First Moscow State Medical University; Moscow, Russia

P10
N-VINYLPYRROLIDONE AMPHIPHILIC POLYMERS: SELF-ASSEMBLY IN AQUEOUS MEDIA AND INTERACTION WITH BLOOD COMPONENTS

A. N. Kuskov, P. P. Kulikov, A. L. Luss, A. S. Gromov, A. V. Goryachaya, M. I. Shtilman
D. I. Mendeleyev University of Chemical Technology of Russia, Miusskaya Sq. 9, Moscow 125047, Russia

P11
COVALENTLY CROSSLINKED CHITOSAN HYDROGELS MODIFIED WITH HYALURONIC ACID: PREPARATION AND IN VITRO EVALUATION

M. Vodiakova[1,2], M. Drozdova[2], M. Maslova[3], T. Demina[4], S. Uspensky[4], N. Kildeeva[3], E. Markvicheva[2]
[1] Mendeleev University of Chemical Technology of Russia, Miusskaya Sq. , 9, 125047 Moscow, Russia
[2] Shemyakin-Ovchinnikov Institute of Bioorganic Chem. , Rus. Acad. Sci. , Miklukho-Maklaya Str 16/10, 117997, Moscow, Russia
[3] Moscow State University of Design and Technology, Sadovnicheskaya Str. , 33/1, 117997 Moscow, Russia
[4] Enikolopov Institute of Synthetic Polymer Materials, Rus. Acad. Sci. , Profsoyuznaya Str, 70, 117393, Moscow, Russia

P12
BIODEGRADABLE POLYSACCHARIDE/POLYPEPTIDE MICROCAPSULES FOR DRUG DELIVERY : DESING AND IN VITRO CHARACTERIZATION

A. Khovankina[1], D. Trushina[2,3], T. Bukreeva[2,3], E. Markvicheva[1]
[1] Shemyakin–Ovchinnikov Institute of Bioorganic Chemistry RAS, Miklukho-Maklaya Str 16/10, 117997 Moscow, Russia,
[2] Federal Scientific Research Centre "Crystallography and Photonics" of Russian Academy of Sciences, Moscow, Russia,
[3] National Research Centre "Kurchatov Institute", Moscow, Russia

P13
MODIFICATION OF POLYHYDROXYALKANOATES FOR IMPROVING THEIR SURFACE PROPERTIES AND BIOCOMPATIBILITY

A. N. Boyandin[1], V. A. Bessonova[2], L. M. Dvoinina[2], D. V. Sapego[2]
[1] Institute of Biophysics SB RAS, Federal Research Center "Krasnoyarsk Science Center SB RAS", Krasnoyarsk, Russia,
[2] Siberian Federal University, Krasnoyarsk, Russia

P14
ENZYME STRUCTURE-ACTIVITY RELATIONSHIP (CHYMOTRYPSIN AND FORMATE DEHYDROGENESE CASES): KINETIC PARAMETERS AND COENZYME SPECIFICITY CAN BE ALTERED UPON APPLICATION OF LOW-FREQUENCY MAGNETIC FIELD

M. M. Veselov[1], M. V. Efremova[1], I. V. Uporov. [1], I. S. Kargov[1], V. I. Tishkov[1], A. G. Majouga[1,2], Yu. I. Golovin[1,2,3], N. L. Klyachko[1,2]
[1] Laboratory for Chemical Design of Bionanomaterials, Faculty of Chemistry, M. V. Lomonosov Moscow State University, Moscow, Russia,
[2] National University of Science and Technology, "MISiS", Moscow, Russia,
[3] Nanocenter, G. R. Derzhavin Tambov State University, Tambov, Russia

P15
SYNTHESIS OF AMPHIPHILIC POLYMERS OF ACRYLIC ACID AND THE CREATION OF BONE CEMENTS BASED ON THEM WITH ANTI-TUBERCULOSIS ACTIVITY

O. Yu. Sizova, Ya. O. Mezhuev, M. I. Shtilman, Yu. V. Korshak, S. V. Osadchenko, V. T. Gegea
D. Mendeleyev, University of Chemical Technology of Russia

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V. N. Rakitskii[1], T. A. Sinitskaya[1], I. P. Gromova[1], P. A. Pletenev[1], N. N. Klimova[1]
[1] Federal Scientific Center of Hygiene named after F. F. Erisman, Moscow, Russia

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N. Ilyushina[1], V. Rakitskii[1]
[1] Federal Scientific Center of Hygiene named after F. F. Erisman, Moscow, Russia.

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I. V. Bereznyak[1], K. B. Lokhin[1], V. N. Rakitskii[1], A. V. Ilnitskaya[1],
[1] Federal Scientific Center of Hygiene named after F. F. Erisman

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G. G. Onishchenko[1], V. A. Tutelyan[2], V. N. Rakitskii[3], K. B. Lokhin[3]
[1] I. M. Sechenov First Moscow State Medical University, Moscow, Russia,
[2] FSBI RAS Nutrition research institute, Moscow, Russia,
[3] Federal Scientific Center of Hygiene named after F. F. Erisman, Moscow, Russia

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V. N. Rakitskii[1], N. E. Fedorova[1], L. G. Bondareva[1], V. V. Bayusheva[1], A. Tsatsakis[2], A. Tsakalof[3]

[1] Federal Scientific Center of Hygiene F. F. Erisman, Moscow, Russia,
[2] University of Crete, Medical School, Heraklion, Greece,
[3] University of Thessaly, School of Medicine, Larisa, Greece

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E. O. Batyrbekov, M. B. Umerzakova
Institute of Chemical Sciences, Almaty, Kazakhstan

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D. Mendeleyev, University of Chemical Technology of Russia

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Allahverdiev S. R. [1], Abbasova Z. I. [2], Rasulova D. A. [2], Gani-zade S. I. [2], Zeynalova E. M. [2], Khalilova Kh. D. [2]
[1] Moscow State University of Education, Moscow, Russia,
[2] Institute of Botany of Azerbaijan National Academy of Sciences, Baku, Azerbaijan

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N. Ormotsadze[1], M. Meskhishvili[1], D. Bibileishvili[2]
[1] Akaki Tsereteli State University, Kutaisi, Georgia
[2] Georgian Technical University, Tbilisi, Georgia

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Kazakh national research technical university named after K. I. Satpayev

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G. I. Boiko, N. P. Lubchenko, A. K. Merekenova
Kazakh national research technical university named by K. I. Satpayev, Almaty, Kazakhstan

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Daria Trushina[1,2], Tatyana Bukreeva[1,2], Maria Antipina[3]
[1] National Research Centre "Kurchatov Institute", Moscow, Russia
[2] Federal Scientific Research Centre "Crystallography and Photonics" of Russian Academy of Sciences, Moscow, Russia
[3] Institute of Materials Research and Engineering, A*STAR, Singapore

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[1] Mendeleyev University of Chemical Technology of Russia, Moscow, Russia
[2] Enikolopov Institute of Synthetic Polymer Materials RAS, Moscow, Russia
[3] Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, RAS, Moscow, Russia
[4] Semenov institute of Chemical Physics, RAS, Moscow, Russia,
[5] Centre Interfacultaire des Biomatériaux, Universite de Liège, Liege, Belgium

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Yu. S. Sotnikova[1], A. Yu. Poritskaya[2], T. S. Demina[3], A. V. Istomin[3], T. A. Akopova[3], A. N. Zelenetskii[3]
[1] Moscow Aviation Institute, Moscow, Russia,
[2] Mendeleyev University of Chemical Technology of Russia, Moscow, Russia
[3] Enikolopov Institute of Synthetic Polymer Materials RAS, Moscow, Russia

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E. P. Mironov [1], I. V. Marchenko[1,2], T. N. Borodina 1, T. V. Bukreeva [1,2]
[1] Shubnikov Institute of Crystallography of Federal Scientific Research Centre Crystallography and Photonics, Russian Academy of Sciences, Moscow, Russia,
[2] National Research Centre Kurchatov Institute, Moscow, Russia

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[1] Lomonosov Moscow State University, Moscow, Russia,
[2] National University of Science and Technology «MISIS», Moscow, Russia,
[3] Pirogov Russian National Research Medical University, Moscow, Russia

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[1] M. V. Lomonosov Moscow State University, Moscow, Russia,
[2] National University of Science and Technology "MISIS" (MISIS), Moscow, Russia,
[3] G. R. Derzhavin Tambov State University, Tambov, Russia,
[4] M. M. Shemyakin, Yu. A. Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russia
[5] University of North Carolina, Chapel Hill, NC, USA

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A. D. Blokhina[1], M. V. Efremova[1,2], A. G. Majouga[1,2], Yu. I. Golovin[1,3], N. L. Klyachko[1,2]
[1] Lomonosov Moscow State University, Moscow, Russia,
[2] National University of Science and Technology "MISIS" (MISIS), Moscow, Russia,
[3] G. R. Tambov State University, Tambov, Russia

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[1] Bach Institute of Biochemistry, Research Center of Biotechnology of the Russian Academy of Sciences, Moscow, Russia,
[2] Department of Chemistry, M. V. Lomonosov Moscow State University, Moscow, Russia

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M. A. Murina[1], K. V. Buravleva[1], D. I. Roshchupkin [1,2]
[1] Federal Research and Clinical Centre of Physical-Chemical Medicine of Federal Medical Biological Agency, Moscow, Russia,
[2] Pirogov Russian National Research Medical University (RNRMU), Moscow, Russia

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E. V. Zolotukhina[1,2], K. V. Gor'kov[1], E. V. Gerasimova[1], S. A. Kleinikova[2]
[1] Institute of Problems of Chemical Physics RAS, Chernogolovka, Russia,
[2] M. V. Lomonosov Moscow State University, Moscow, Russia

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V. I. Kapelko[1], V. L. Lakomkin[1], A. A. Abramov[1], E. V. Lukoshkova[1], V. V. Ermishkin[1], A. F. Vanin[2]
[1] Russian Cardiological Research and Productive Complex, Moscow, Russia,
[2] N. N. Semenov Institute of Chemical Physics, Moscow, Russia

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A. N. Vaneev[1], A. D. Aleksashkin[1], T. O. Abakumova[2], O. A. Kost[1], A. V. Kabanov[1,3], N. L. Klyachko[1,3]
[1] Lomonosov Moscow State University, Moscow, Russia,
[2] The Serbsky State Scientific Center for Social and Forensic Psychiatry, Moscow, Russia,
[3] University of North Carolina at Chapel Hill, USA