

CURRICULUM VITAE

NAME: Alexander Victorovich Kabanov
DATE OF BIRTH: March 27, 1962 (Moscow, USSR)
CITIZENSHIP: Naturalized US citizen, Russian citizen
WORK ADDRESS: **HOME ADDRESS:**

Marsico Hall, Office 2012,
 Campus Box# 7362
 125 Mason Farm Road
 Chapel Hill NC 27514-5307
 United States of America
 Tel: +1 (919) 537-3800
 Fax: +1 (919) 962-9922
 E-mail:
 kabanov@email.unc.edu

7016 Turkey Farm Rd,
 Chapel Hill, NC 27514
 Tel.: +1 (402) 598-3850 (mob.)
 E-mail: skabanov@me.com

WEB SITES:

<https://pharmacy.unc.edu/research/centers/cnodd/>
<https://pharmacy.unc.edu/directory/kabanov/>
<http://kabanovlab.web.unc.edu>
<http://www.nanodds.org>



PERSONAL INFORMATION:

- Married: Marina Sokolsky-Papkov
- Children: Maria (b. 1984), Dariya (b. 1993), Natalia (b. 2002), Eitan (b. 2005), Eden (b. 2009)

EDUCATION:

Institution	Years	Degree	Field	Thesis and advisor(s)
Faculty of Chemistry, M.V. Lomonosov Moscow State University, Moscow, USSR	1979 – 1984	Diploma with distinction (M.S. equivalent)	Chemistry	"Modification of proteins (enzymes) with water-insoluble reagents. Study of interaction of partially hydrophobized proteins with lipid membranes", Dr. A.V. Levashov
Department of Chemical Enzymology, M.V. Lomonosov Moscow State University, Moscow, USSR	1984 - 1987	"Candidate of Chemical Sciences" (Ph.D. equivalent)	Chemical Kinetics and Catalysis	"Chemical modification of water-soluble proteins (enzymes) for imparting them the membrane-active properties" Prof. K. Martinek and Prof. A.V. Levashov

SPECIAL DEGREE (D.Sc.)¹

Specialized Scientific Council at Moscow State University recommended granting the Doctor of Chemical Sciences (D.Sc.) degree as a result of the defense of the dissertation entitled "*Micellar systems for engineering of conjugates and complexes of biologically active polymers*" on December 4, 1990. The Highest Attestation Commission of the USSR Counsel of Ministers granted the degree on April 19, 1991.

SUMMARY:

Contribution to science. Made broad impact to nanomedicine by introducing polymeric micelles, polyelectrolyte complexes, nanogels, macrophages and exosomes for therapeutic delivery of small drugs, nucleic acids, and proteins. This work led to the first in class polymeric micelle drug to enter clinical trials.

¹ This is the highest academic qualification for a scholar in Russia/former USSR, which is usually granted after "Candidate of Chemical Sciences" (Ph.D. equivalent) and qualifies individual for a rank of a Full Professor. At the time of being granted this degree Dr. Kabanov (28) was its youngest recipient in chemistry in Soviet Union.

Mentorship. Trained 80 graduate students and postdocs half of whom are women and underrepresented minorities. 19 trainees became faculty. Was a founding PI of the NIH Center of Biomedical Research Excellence (CoBRE) "Nebraska Center for Nanomedicine" and is PI of NCI's T32 Carolina Cancer Nanotechnology Training Program (C-CNTP).

Selected Technology Transfer and Entrepreneurial Activities:

DeAQUA Pharmaceuticals Inc.	Co-founder in 2018 with R. Jordan and R. Luxenhofer, president, director, drug solubilization based on poly(2-oxazolines) micelles
BendaRx Pharma Corp.	Director since 2017, a subsidiary of SoftKemo, develops blood cancer drug
SoftKemo Pharma Corp.	Co-founder in 2016, shareholder and director, drug delivery technologies
InnovaForm Technologies, LLC	Scientific founder and partner from 2005 to 2012 with FMC Corporation and UneMed/UNMC, CSO, director, pesticide delivery technologies
Supratek Pharma, Inc.	Co-founder in 1994 with V. Alakhov & O. Romar, Licensed technology, VP for technology development, director, first polymeric micelle drug delivery company

Patents 36 issued US Patents and >100 PCT applications and issued international patents

Publications Has 354 refereed scientific publications with over 47,000 citations to his work as measured by *Google Scholar* in January 2023; Kabanov's Hirsch Index "*h-Index*" = 110, that is he has 110 publications with 109 or more citations; see Hirsch, J. E. *Proc. Nat. Acad. Sci.* 2005, 46, 16569. Kabanov is a highly cited researcher in pharmacology & toxicology (Clarivate Analytics). He is ranked #27 in pharmacology & pharmacy among scientists representing 2% of all scientists publishing in this subfield (>131,900) based on career-long citation impact; see Ioannidis, J.P.A. DOI: 10.17632/btchxktzyw.4.

Lectures Has given >200 plenary and invited lectures including 10 lectures at Gordon Research Conferences, and >170 invited seminars at academic institutions and companies.

Research Support Cumulative research support is >\$120 M in grants and >\$60 M in private investment and industry-sponsored R&D funding. He has been funded by the National Institutes of Health, the National Science Foundation, US Department of Defense among other foundations and agencies.

Diversity training statement: Kabanov has trained 80 graduate students and postdoctoral scientists half of whom are women and underrepresented minorities. Many of doctoral students after obtaining their degrees continued postdoctoral training in supplementary fields in Stanford, MIT, Yale, UNC, Institute Pasteur (France), Moscow State University, and other academic institutions. Nineteen past members of Kabanov laboratory hold faculty appointments ranging from assistant professors to department heads and deans. Current PI of T32 Carolina Cancer Nanotechnology Training Program (C-CNTP). As part of this program, mentored two underrepresented minority postdoctoral scientists, who are currently faculty in Carnegie Mellon University (Dr. Elisabeth Wayne) and East Carolina University (Dr. Juan Beltran-Huarac). One more underrepresented minority postdoctoral scientist (Dr. Edikan Archibong Ogunnaike) was trained in C-CNTP in immune-oncology and currently continues in Kabanov laboratory in preparation for her future transition to a faculty position. Additionally, Kabanov have been a mentor in NIH NHLBI K01 award to UNC underrepresented minority faculty (Dr. Edward Moreira Bahnsen). During his tenure at the University of Nebraska Medical Center was the founding director of the NIH Center of Biomedical Research Excellence (CoBRE) grant (P20) "Nebraska Center of Nanomedicine", a multidisciplinary center that augments and strengthens institutional biomedical research capacity by developing faculty research capability, mentoring early career faculty, and enhancing research infrastructure. Therefore, Kabanov has an ample experience in leading complex, cross-disciplinary, collaborative projects with a principal research and training components and have track record of establishing and managing inclusive, safe, and supportive ecosystem for trainees and early career scientists from all backgrounds.

Leadership: Widely recognized as a visionary leader in nanomedicine and drug delivery and an advocate for science and education. Has track record of major successes in gaining support for scientists on the national and international arenas. Has unique prospective in global science through ties with academic institutions and

communities in United States, Europe, and Japan that is amplified by being an elected member and fellow of academies and learned societies. Has held leadership roles in the academic institutions in the United States and demonstrated commitment to training and institutional support of junior faculty, and postdoctoral scientists. Successfully mentored URM students, postdocs and faculty and has advocated diversity and gender equality in science and training. Since 2008 has led organizations with multimillion dollar annual budgets. As a founding director of Nebraska CoBRE worked with university's leadership, deans, directors, and department heads toward multiple faculty recruitments. Has served in leadership roles for international scientific societies, as well as board member for multiple start-up companies. Has initiated the first nanomedicine symposium series in the United States that attracted thousands of participants since 2003. Has taken public stands against the use of chemical weapons, police brutality, in support of international collaboration, and against the war. Co-authored a petition to end political persecution (Nature 2021, 591, 202 doi: <https://doi.org/10.1038/d41586-021-00594-y>) joined by hundreds of academics across the globe and declarations against the war and in support of scholars affected by the Russian aggression in Ukraine.

ELECTION AS MEMBER OF ACADEMIES / FELLOW OF LEARNED SOCIETIES

- **Fellow**, American Association for the Advancement of Science, elected 2021
- **Corresponding member**, Russian Academy of Sciences, elected 2019
- **Fellow**, Controlled Release Society, elected 2018
- **Fellow**, National Academy of Inventors, elected 2017
- **Fellow**, American Institute for Medical and Biological Engineering, elected 2015
- **Member**, *Academia Europaea* (The Academy of Europe), elected 2013

OTHER AWARDS AND HONORS:

- **Founders Award, The Controlled Release Society, 2022**
- Acknowledgement “for considerable contributions to science and perennial conscientious work”, Ministry of Science and Highest Education of the Russian Federation (order No. 3 of January 29, 2020).
- Life Sciences award (Outstanding research from a university), Triangle Business Journal 2018
- George Gamow award for “cycle of works that initiated the use of polymeric nano-materials for the delivery of drugs and nucleic acids to the cell”, Russian-American Science Association, 2017
- Highly Cited (Pharmacology & Toxicology), Thompson Reuters / Clarivate Analytics, 2014, 2018, 2021
- Thompson Reuters Russian Highly Cited Researcher Award (Life Sciences), Clarivate Analytics, 2016
- RUSNANOPRIZE short list for being first to implement polymeric micelle technology into mass production (with Kazunori Kataoka, Min-Hsyo Seo and Samyang Biopharmaceutical Corporation), 2016
- Dresden Senior Fellow Award, 2015
- John G. Wagner Memorial Lectureship Award in Pharmaceutical Sciences, University of Michigan, Ann Arbor, 2014
- Winner of the first open public competition for the grants of the Government of Russian Federation to conduct research under direction of leading scientists in institutions of highest education (“MegaGrant”)², 2010
- Professor of Changhai Hospital, Second Military Medical University, Shanghai, China, 2010
- Scientist Laureate³, University of Nebraska Medical Center, 2009
- Visiting Professor of Tongji Medical School, HUST, China, 2008

² Also known as Russian “Megagrant”.

³ The highest honor to a researcher in the UNMC.

- Outstanding Research and Creative Activity Award (ORCA)⁴, University of Nebraska 2007
- University of Nebraska Medical Center Distinguished Scientist, 2006
- University of Nebraska Pioneer, 2004
- NSF Special Creativity Award, 2002
- NSF CAREER Award, 1995
- USSR Medal "For Valiant Labor", signed by President Mikhail Gorbachev, 1991
- Lenin Komsomol Prize⁵ for the cycle of work entitled "Physicochemical studies of regulation of membrane biocatalysts and receptors", 1988
- Lenin scholar (graduate), M.V. Lomonosov Moscow State University, 1984-1987
- Lenin scholar (undergraduate), M.V. Lomonosov Moscow State University, 1983-1984
- Morozov scholar (undergraduate), M.V. Lomonosov Moscow State University, 1982-1983

ACADEMIC APPOINTMENTS:

- Professor (adjunct), the UNC/NCSU Joint Department of Biomedical Engineering, University of North Carolina at Chapel Hill, NC, 2014-present
- Mescal Swaim Ferguson Distinguished Professor, Division of Pharmacoengineering and Molecular Therapeutics, UNC Eshelman School of Pharmacy, University of North Carolina at Chapel Hill, NC, 2012-present
- Director, Center for Nanotechnology in Drug Delivery, UNC Eshelman School of Pharmacy, University of North Carolina at Chapel Hill, NC, 2012-present
- Co-Director, Carolina Institute for Nanomedicine, University of North Carolina at Chapel Hill, NC, 2012 - present.
- Professor (adjunct), College of Pharmacy, University of Nebraska Medical Center, Omaha, NE, 2012 - present.
- Professor and Director (secondary appointment), Laboratory of Chemical Design of Bionanomaterials, Faculty of Chemistry, M.V. Lomonosov Moscow State University, Moscow, Russia, 2010 -
 - 2022 – deferred in response to Russian aggression in Ukraine.
- Professor (adjunct), Russian State Medical University, Moscow, Russia, 2009-2022.
- Professor (adjunct), Faculty of Chemistry, M.V. Lomonosov Moscow State University, Moscow, Russia, 2002-2010.
- Director, National Institutes of Health Center for Biomedical Research Excellence (CoBRE) Nebraska Center for Nanomedicine, 2008-2012.
- Co-Director, Center for Clinical and Translational Research, University of Nebraska Medical Center, Omaha, NE, 2008-2012.
- Professor (courtesy), Department of Genetics, Cell Biology and Anatomy, University of Nebraska Medical Center, Omaha, NE, 2005-2012.
- Director, Center for Drug Delivery and Nanomedicine, University of Nebraska Medical Center, Omaha, NE, 2004-2012.
- Parke-Davis Endowed Chair in Pharmaceuticals, Department of Pharmaceutical Sciences, College of Pharmacy, University of Nebraska Medical Center, Omaha, NE, 2004-2012.
- Professor (courtesy), Eppley Institute for Cancer Research, University of Nebraska Medical Center, Omaha, NE, 2001-2012.

⁴ The highest University-wide award honoring excellence and distinction in research.

⁵ The highest award for young scientists in the former USSR.

- Professor, Department of Pharmaceutical Sciences, College of Pharmacy, University of Nebraska Medical Center, Omaha, NE, 2001-.
- Member, UNMC/Eppley Institute Cancer Center, Omaha, NE, 1995-.
- Graduate College Faculty Fellow, University of Nebraska, Omaha, NE, 1995-.
- Associate Professor, Department of Pharmaceutical Sciences, College of Pharmacy, University of Nebraska Medical Center, Omaha, NE, 1994-2001, tenured 1998.
- Leading Research Fellow, Department of Chemical Enzymology, Faculty of Chemistry, M.V. Lomonosov Moscow State University, Moscow, Russia, 1991-1998.
- Head (half-time), Department of Biopolymer Chemistry, All-Russia Research Center of Molecular Diagnostics and Therapy, Moscow, Russia, 1992-1994.
- Head (half-time), Department of Bioregulation, Institute of Applied Molecular Biology, All-Union Research Center of Molecular Diagnostics and Therapy, USSR Ministry of Health, Moscow, USSR, 1991.
- Senior Research Fellow, Department of Chemical Enzymology, Faculty of Chemistry, M.V. Lomonosov Moscow State University, Moscow, USSR, 1990-1991.
- Head (half-time), Laboratory of Biopolymer Chemistry, Institute of Applied Molecular Biology, USSR Ministry of Health, Moscow, USSR, 1988-1991.
- Research Fellow, Department of Chemical Enzymology, Faculty of Chemistry, M.V. Lomonosov Moscow State University, Moscow, USSR, 1988-1990.
- Junior Research Fellow, Department of Chemical Enzymology, Faculty of Chemistry, M.V. Lomonosov Moscow State University, Moscow, USSR, 1987-1988.

ENTREPRENEURIAL EXPERIENCE:

- DelAQUA Pharmaceuticals Inc., Chapel Hill, NC
 - chairman BOD (2022-present)
 - director and interim president (2018-2022)
 - co-founder and co-inventor of the core technology (2018)
- BendaRx Pharma Corp., Montreal, Canada, director (2017-present)
- SoftKemo Pharma Corp., Montreal, Canada, shareholder and director (2016-present)
- Ostrea Bio., Chapel Hill, NC, co-founder, director (2017-2019)
- NeuroNano Pharma Inc., Chapel Hill, NC, scientific founder, chairman BOD (2011-2019)
- InnovaForm Technologies, LLC, Philadelphia, PA (2005-2012)
 - director and CSO
 - scientific founder & partner (other partners UneMed/UNMC and FMC corporation)
- Supratek Pharma Inc., Montreal, Canada
 - director (1994, 1996-1997, 2008-2016)
 - chairman of the SAB (1995-2008)
 - vice president, technology (1994), intellectual property (1995-1998)
 - scientific co-founder and co-inventor of the core technology (1994)
- Moscow Institute of Biotechnology Inc., Moscow, Russia and Montreal, Canada
 - director, vice president for technology transfer (1992-1994)
 - co-founder, director of research (1992-1993)

LEARNED SOCIETIES AND PROFESSIONAL ASSOCIATIONS:

- Sigma Xi, 2021 – member
- Russian Academy of Sciences (RAS), 2019 – corresponding member (elected)
- National Academy of Inventors (NAI), 2017 – fellow (elected)
- American Association for the Advancement of Science (AAAS), 2017-present, 2021 – fellow (elected)
- American Association of Pharmaceutical Sciences (AAPS), 1996-1999, 2016-present
- American Institute for Medical and Biological Engineering (AIMBE), 2014 – fellow (elected)
- Russian American Science Association (RASA), Boston, MA, 2014 – present, member, honorary member (2021)
- *Academia Europaea* (The Academy of Europe), 2013 – member (elected)
- American Chemical Society (ACS), 1994-present (Polymer Division, 1996-; Division of Polymer Materials Science and Engineering, 1997-)
- American Society for Nanomedicine (ASNM), 2009-2011
- Controlled Release Society (CRS), 2001-present, 2018 – fellow (elected), 2019-2022 director-at-large (elected), 2022-2023 chair of the College of Fellows (appointed).
- American Society of Gene Therapy (ASGT), 2001
- American Association of Colleges of Pharmacy (AACP), 1994-1995
- The New York Academy of Sciences, 1994-1995
- Russian Immunology Society, 1989-1993
- Russian Biochemical Society (Moscow section), 1986-1993
- D. I. Mendeleev Chemical Society, 1980-1993

SERVICE - CONSULTING, SCIENCE ADVOCACY, EDITORIAL AND REVIEW:**a. National/International**

- Jury member, Blavatnik National Awards, 2022
- Member, Grants Council of the Government of Russian Federation, 2018–2022. Resigned in response to Russian aggression in Ukraine, March 2022.
- Member, Scientific-technological Council at the Presidium of the Board of Trustees of the Educational foundation “Talent and Success”, 2018-2019.
- Scientific Advisor & Workshop participant on Convergence: The Future of Health report, Cambridge, MA, 2016 and the letter to the new United States Administration (Science 10 Feb 2017: 355, 6325, pp. 589 DOI: 10.1126/science.aam8563).
- Conceptualized and spearheaded a proposal for Presidential Program of Support of Research to enhance research infrastructure in Russia through support of postdoctoral scientists and junior investigators; the Program has been implemented by the Russian Science Foundation (> 60 Bln. Rub. in 2017-2023).
- Member, RAS working group of on Convergent technologies, 2016.
- Member, Science Council of the Ministry of Education and Science of Russian Federation, 2015-2017, reappointed 2017-2018.

b. Scientific Societies

- Controlled Release Society
 - Chair of the College of Fellows sub-committee (appointed) 2022-2023
 - Director-at-large (elected) 2019-2022

- Member, Board of Scientific Advisors (elected), 2003-2006
- Russian American Science Association, Boston, MA (501(c)3)
 - Director (elected), CEO and Treasurer (2022-).
 - Director (elected), Secretary and Treasurer (2021)
 - President (elected), 2018-2020 (President-elect, 2017)
 - Member, Coordinating Committee, 2014-present
- American Society of Gene Therapy, Non-Viral Gene Transfer Vectors Committee, 2003-2006.

c. Industry consulting (partial)

- Has served as an expert and consultant in various IP matters
- Mersana Therapeutics, Inc., Boston, MA, USA, consultant, 2009.
- FMC Corporation, Philadelphia, PA, USA, consultant, 2005-2011.
- Infoscitex Corp., Waltham, MA, USA, consultant, 2005-2009.
- EIC Laboratories, Inc., Norwood, MA, USA, consultant, 2001-2005, 2009.
- Hunton & Williams, LLP, New York, NY, USA, consultant, 2006
- Supratek Pharma, Inc., Montreal, Canada, consultant, 1994-2003.

d. Academia advising⁶

- Member, International Academic Council, Novosibirsk State University (providing strategic advice on the University scientific and educational development to the Rector), 2019 - 2021.
- Chair, External Advisory Board, NIH Center for Biomedical Research Excellence (CoBRE) “Center for Targeted Therapeutics (CTT)”, 2014-present.
- Chair, External Advisory Board, NIH (CoBRE) “Nebraska Center of Nanomedicine”, 2012-present.
- Site visits of the World Premier International Research Center initiative (WPI Program) for Kyoto University Institute for Integrated Cell-Material Sciences (iCeMS), Japan Society for Promotion of Science, July 14-15, 2011; July 25-26, 2012, September 2013, September 2014, September 2016.
- Academic Program Review, USC School of Pharmacy, April 29 – May 2, 2014
- Science Foundation Ireland site visit for the Irish Drug Delivery Network (IDDN) Strategic Research Cluster (SRC), Sep. 6-8, 2010.
- Member, Scientific Advisory Board, Center for Drug Delivery Research (CDDR) at Polytechnic University-SUNY/Downstate, New York, 2006
- Member, Scientific Council and Board of Directors, Russian Research Center of Molecular Diagnostics and Therapy, Moscow, Russia, 1992-1994.

e. Grants review (partial)

- NIH ad-hoc panels: 2017/05 ZCA1 TCRB-D (M3) S NCI R21 and R03 SEP-8; 2016/10 ZGM1 RCB-A (CI) COBRE Phase 1; 2016/10 ZCA1 TCRB-6 (O1) S IRCN; 2016/05 ZCA1 TCRB-D (M1) S IRCN; 2015/10 ZCA1 RPRB-C (O2) S; 2015/10 ZCA1 TCRB-9 (O1) R; 2015/05 ZCA1 SRB-C (M3) S; 2015/05 ZCA1 SRB-2 (M1) S; 2010/2 ZCA1 GRB-S (M1), NCI Centers of Cancer Nanotechnology Excellence I; 2004 ZAI1-LR-A-S1 (50) U192004; 2003 ZRG1 SSS2 (50), R01/R21 (Chair); 2002, ZRG1 SSS-5 (01) P41; 1998/1999 ZRG1 CVB Hematology-1 SBIR/STTR.
- NIH Biomaterials and Biointerfaces Study Section, Chair (2006-2008), Chartered Member (2004-2006), ad-hoc (2003-2004).

⁶ See also administrative service below.

- NSF ad-hoc panels: 2003 Biotechnology and Biochemical Engineering CAREER; 2001 Division of Material Research/Polymers CAREER; 1998 Biochemical Engineering and Biotechnology panel for CAREER awards.
- Grant reviewer to Russian Science Foundation (2016); Canada Foundation for Innovation (2006); Australian Research Council (2005); French Association Against Myopathies (2003); European Science Foundation (2002); Israel Science Foundation (2002); USA NSF (Division of Material Research, Division of Bioengineering and Environmental Systems) (1995-2015); Petroleum Research Fund (1998, 2000, 2002); UNMC Seed Grants (1996, 1997).

f. Editorial boards and journal peer-review:

- Editor-in-Chief, Reviews and Advances in Chemistry (ReACh), formerly Review Journal of Chemistry, Pleiades (USA), 2019-present
- Member, Editorial Board, "Priroda" (popular natural science journal of the Russian Academy of Sciences)
- Member, Editorial Council, Polymer Science, series A,B,C (Высокомолекулярные Соединения, Серии А, Б, С), 2019-.
- Associate Editor/Expert Review Panel, Nanomedicine, Future Medicine, 2009-.
- Member, Editorial Board, Journal of Controlled Release, 1997-.
- Member, Editorial Board, Advanced Drug Delivery Reviews, 2000-.
- Member, Editorial Board, Section Editor in Drug Delivery and Developmental Therapeutics, Journal Neuroimmune Pharmacology, 2006-2012. Member, Honorary Editorial Board, Nanomedicine: Nanotechnology Biology and Medicine, Elsevier, 2009; Member, Editorial Advisory Board, Bioconjugate Chemistry, 2002-2012; Member, Editorial Board, PharmSci, 1999-2004; Journal of Bioactive and Compatible Polymers, 1998-2010; International Journal of Nanomedicine, 2005-2010; Journal of Pharmaceutical Sciences, 2004-2009.
- Reviewer for Angewandte Chemie, Antisense and Nucleic Acid Drug Development, Biochemical Pharmacology, Biochimica et Biophysica Acta, Bioconjug. Chem., Biomacromolecules, Biopolymers, BioTechniques, British Journal of Pharmacology, Critical Reviews in Therapeutic Drug Carrier Systems, Gene Therapy, Human Gene Therapy, Industrial and Engineering Chemistry Research, Langmuir, Macromolecules, Molecular Pharmacology, Molecular Therapy and Genomics, Nature Biotechnology, Pharmaceutical Research, Pharmaceutical Science and Technology Today, Proceedings of National Academy of Sciences USA, Science Advances, Journal of American Chemical Society, Journal of Bioactive and Compatible Polymers, Journal of Biomaterials Science, Journal of Biomedical Materials Research, Journal of Colloid and Interface Science, Journal of Controlled Release, Journal of Drug Targeting and Journal of Pharmaceutical Sciences.

g. Conferences organized

- Vice-chair (elected, upcoming) Gordon Research Conference (GRC) Biotherapeutics and Vaccines Development, 2024
- Chair, Program committee, 4th International Scientific Conference "Science of the Future", Sochi, Russia, May 14-17, 2019
- Chair, GRC "Cancer Nanotechnology", Mt. Snow Resort, VT, Aug. 2017.
- Founder and Director, Carolina Nanoformulation Workshop, Chapel Hill, NC, 2016, 2017, 2018, 2020
- Co-Chair, Program committee, 2nd International Scientific Conference "Science of the Future", Kazan, Russia, Sep 20-23, 2016
- Vice-chair, GRC "Cancer Nanotechnology", Mt. Snow Resort, VT, Aug. 2015.
- Co-chair (with Kam Leong), 12th International Nanomedicine and Drug Delivery Symposium (NanoDDS'14), Chapel Hill, NE, Oct. 6-8, 2014.

- Chair, Program committee, 1st International Scientific Conference "Science of the Future", Sept. 17-20, 2014, St. Petersburg, Russia,
- Program committee, XII International Conference on Nanostructured Materials (NANO 2014), July 13-18, 2014 Moscow, Russia
- Co-chair (with Ray Ottenbrite), 10th International Symposium on Frontiers in Biomedical Polymers, Vancouver, Canada, June 3-6, 2013.
- Organizing committee, 9th International Nanomedicine and Drug Delivery Symposium (NanoDDS'11), Salt Lake City, UT, Oct. 14-16, 2011.
- Co-chair (with Tatiana Bronich), 8th International Nanomedicine and Drug Delivery Symposium (NanoDDS'10), Omaha, NE, Oct. 5-6, 2010.
- Organizing committee, 7th International Nanomedicine and Drug Delivery Symposium (NanoDDS'09), Indianapolis, IN, Oct. 5-6, 2009.
- Organizing committee: 1st International Summer School - Nano2009. Nanomaterials and Nanotechnologies in Living Systems. Moscow Region, Russia, June 29 – July 4, 2009.
- International Advisory Board: 2nd European Summer School in Nanomedicine, Quinta Da Marinha Hotel, Lisbon, Portugal, June 12-16, 2009.
- Co-chair (with Christine Allen and Kazunori Kataoka), 6th International Nanomedicine and Drug Delivery Symposium (NanoDDS'08), Toronto, Canada, 2008.
- Organizer, Special Course in Nanopharmacology and Nanomedicine, University of Nebraska Medical Center, Omaha, NE, June 4-5, 2008.
- Organizer, USA - Japan Mini-Symposium on Materials Medicine and Nanopharmacology, University of Nebraska Medical Center, Omaha, NE, March 25, 2008.
- Scientific Advisory Board, 7th International Symposium on Frontiers in Biomedical Polymers, Ghent, Belgium, 2007.
- Bioactive Materials Program Chair for the 34th Controlled Release Society Annual Meeting, 2007.
- Chair, 4th International Nanomedicine and Drug Delivery Symposium (NanoDDS'06), Omaha, NE, 2006.
- Co-chair (with Thomas Kissel), GRC "Drug Carriers in Medicine and Biology", Big Sky, MT, August 20-25, 2006.
- Co-chair (with Hamid Ghandehari), 3rd International Nanomedicine and Drug Delivery Symposium, Baltimore, MD, 2005.
- Co-chair (with Kalle Levon), 2nd Annual Symposium on Nanomedicine and Drug Delivery, Brooklyn, NY, 2004.
- Chair, US-Japan Minisymposium on Nanomedicine and Drug Delivery, Omaha, NE, 2003.⁷
- Organizational Committee, 5th International Symposium on Polymer Therapeutics: from Laboratory to Clinical Practice, Cardiff, UK, 2002.
- Scientific Advisory Board, International Symposium on Polymer Therapeutics, Nara, Japan, 2001.
- Scientific Advisory Committee, 4th International Symposium on Polymer Therapeutics, From Laboratory to Clinical Practice, London, UK, 2000.
- Co-organizer, Symposium on "Materials Design and Formulation for Drug and Gene Delivery" at the ACS 219th National Meeting, San Francisco, CA, 2000.
- Co-organizer, 4th International Biorelated Polymers Symposium, at the ACS 220th National Meeting, Washington, D.C, 2000.
- International Scientific Advisory Board 3rd International Symposium on Frontiers in Biomedical Polymers Including Polymer Therapeutics, Lake Biwa, Shiga, Japan, 1999.

⁷ Initiated the International Nanomedicine and Drug Delivery Symposium series (NanoDDS): nanodds.org.

ADMINISTRATIVE SERVICE (other than administrative appointments):**UNC Eshelman School of Pharmacy:**

- Member, Full Professors Committee, 2012-.
- Member, Division Chair Search Committee, 2015.
- Member, Faculty Search Committee, 2013.
- Member, Scholarship Committee, 2013.
- HELPRx Committee and Global Research Subcommittee, 2013.

UNC-Chapel Hill:

- Member, Task Force on the Commercialization of Technology, 2012.

UNMC College of Pharmacy:

- Chair, Nanomedicine Faculty Search Committee, 2008-2009.
- Chair, Search Committee for Genomics Senior Faculty Recruitment, 2003-2004.
- Member, Educational Technology Committee, 1999-2002.
- Member, Pharmaceutical Sciences Graduate Program Committee, 1999-2003 (reelected 2000).
- Member, Search Committee for Pharmaceutical Sciences Department Chair, 1999-2002.
- Member, Search Committee for faculty position in Membrane Protein Biophysics, 1999.
- Chair, Search Committee for faculty position in Drug Delivery, 1997-1998.
- Member, Search Committee for faculty position in Pharmaceuticals, 1996-1997.
- Member, Search Committee for faculty position in Drug Delivery, 1996-1997.
- Member, Grade Appeals, 1995-1999.
- Member, Equipment Committee, 1995-1996.
- Member, Student Discipline Committee, 1995-1996.

UNMC:

- Member, Search Committee for UNMC Vice Chancellor for Research, 2010-2011.
- Member, Search Committee for College of Pharmacy Dean, 2007.
- Member, Internal Advisory Board for Center of Neurovirology and Neurodegenerative Disorders, 2004.
- Member, Internal Advisory Board for UNMC-Eppley Cancer Center, 2003-2012.
- Member, UNMC Faculty Senate Intellectual Property Committee, 2003-2006.
- Member, UNMC Core Facility Advisory Council, 2002 - 2006.
- Member, UNMC Research Development Board, 1999 - 2003.
- Member, UNMC Technology Evaluation and Protection Committee, 1999 - 2003.
- Member, UNMC Faculty Senate, August 1997 - 2003 (reelected 2000).
- Member, UNMC Senate Membership & Elections Committee, 1998-1999.
- Member, UNMC Senate Faculty Recruitment and Retention Committee, 1999.
- Ad-hoc, UNMC Faculty Senate Committee for Conflict-of-Interest Policy Review, 2002.

Other:

- Member, SkolTech Biomedical Centers for Research Education and Innovation (CREI) Director's search, 2012.

- Member, University of Nebraska Outstanding Research and Creative Activity (ORCA) Award Committee, 2009-2011.

PUBLICATIONS:⁸**Original articles:**

1. Rakhimbekova A, Lopukhov A, Klyachko N, Kabanov A, Madzhidov TI, Tropsha, A (2023) Efficient design of peptide-binding polymers using active learning approaches. *J Control Release*, 353, 903-914, <https://doi.org/10.1016/j.jconrel.2022.11.023>
2. Ramsey JD, Stewart IE, Madden EA, Lim C, Hwang D, Heise MT, Hickey AJ, Kabanov AV (2022) Nanoformulated Remdesivir with extremely low content of poly(2-oxazoline)-based stabilizer for aerosol treatment of COVID-19. *Macromolecular Bioscience*, 2200056 <https://doi.org/10.1002/mabi.202200056>
3. Fay JM, Lim C, Finkelstein A, Batrakova E, Kabanov AV (2022) PEG-free polyion complex nanocarriers for brain-derived neurotrophic factor. *Pharmaceutics*, 14(7):1391. doi: 10.3390/pharmaceutics14071391, PMID: 35890287 PMCID: PMC9317007
4. Figueiras A, Domingues C, Jarak I, Santos AI, Parra A, Pais A, Alvarez-Lorenzo C, Concheiro A, Kabanov A, Cabral H, Veiga F (2022) *Pharmaceutics*, 14(8) 1700 <https://doi.org/10.3390/pharmaceutics14081700>
5. Freire C, Ramsey JD, Pho H, Kojima R, Zhao Y, Kim L, Anokye-Danso A, Berger S, Ahima RS, Batrakova EV, Kabanov AV, Polotsky VY (2022) Leptin-loaded extracellular vesicles treat sleep-disordered breathing in mice with obesity. *Am J Respir Cell Mol Biol*, 67 (6) 720-723. <https://doi.org/10.1165/rcmb.2022-0229LE> PubMed: 36454084
6. Lim C, Dismuke T, Malawsky D, Ramsey JD, Hwang D, Godfrey VL, Kabanov AV, Gershon TR, Sokolsky-Papkov M (2022) Enhancing CDK4/6 inhibitor therapy for medulloblastoma using nanoparticle delivery and scRNA-seq-guided combination with sapanisertib. *Sci Adv*. 8 (4) eab15838 DOI: 10.1126/sciadv.abl5838
7. Veselov MM, Uporov IV, Efremova MV, Le-Deygen IM, Prusov AN, Shchetinin IV, Savchenko AG, Golovin YI, Kabanov AV, Klyachko NL (2022) Modulation of α -chymotrypsin conjugated to magnetic nanoparticles by the non-heating low-frequency magnetic field: Molecular dynamics, reaction kinetics, and spectroscopy analysis (2022) *ACS Omega* 2022, 7, 24, 20644–20655. <https://doi.org/10.1021/acsomega.2c00704>
8. Lim C, Ramsey JD, Hwang D, Teixeira SCM, Poon C-D, Strauss JD, Rosen EP, Sokolsky-Papkov M, Kabanov AV (2022) Drug-dependent morphological transitions in spherical and worm-like polymeric micelles define stability and pharmacological performance of micellar drugs. *Small*, 18(4), e2103552. doi: 10.1002/smll.202103552.
9. Hwang D, Vinod N, Skoczen SL, Ramsey JD, Snapp KS, Montgomery SA, Wang M, Lim C, Frank JE, Sokolsky-Papkov M, Li Z, Yuan H, Stern ST, Kabanov AV (2021) Bioequivalence assessment of high-capacity polymeric micelle nanoformulation of paclitaxel and Abraxane[®] in rodent and non-human primate models using a stable isotope tracer assay. *Biomaterials*. 278:121140. doi: 10.1016/j.biomaterials.2021.121140. PMID: 34634661.
10. Seo Y, Ghazanfari L, Master A, Vishwasrao HM, Wan X, Sokolsky-Papkov M, Kabanov AV (2021) Poly(2-oxazoline)-magnetite NanoFerrogels: Magnetic field responsive theranostic platform for cancer drug delivery and imaging. *Nanomedicine: Nanotechnology, Biology and Medicine* 39, 102459. doi: 10.1016/j.nano.2021.102459 PMID: 34530163
11. Hanafin PO, Jermain B, Hickey AJ, Kabanov AV, Kashuba AD, Sheahan TP, Rao GG (2021) A mechanism-based pharmacokinetic model of remdesivir leveraging interspecies scaling to simulate COVID-19 treatment in humans CPT: *Pharmacometrics & Systems Pharmacology*, DOI: 10.1002/psp4.12584, PMID: 33296558 PMCID: PMC7894405
12. Hwang D, Dismuke T, Tikunov A, Rosen EP, Kagel JR, Ramsey JD, Lim C, Zamboni W, Kabanov AV, Gershon TR, Sokolsky-Papkov M (2021) Poly(2-oxazoline) nanoparticle delivery enhances the therapeutic potential of vismodegib for medulloblastoma by improving CNS pharmacokinetics and reducing systemic toxicity.

⁸ Times cited: "Google Scholar" - > 46,800, *h*-index 109, *i10*-index 347; WoS - > 31,700, *h*-index 97 (Highly Cited Researcher), Scopus > 34,200, *h*-index 98

Nanomedicine: Nanotechnology, Biology and Medicine 32, 102345, DOI: 10.1016/j.nano.2020.102345, PMID: 33259959

13. Lopukhov AV, Yang Z, Haney MJ, Bronich TK, Sokolsky-Papkov M, Batrakova EV, Klyachko NL, Kabanov AV (2021) Mannosylated cationic copolymers for gene delivery to macrophages, *Macromolecular Bioscience*, 21(4), e2000371, DOI: [10.1002/mabi.202000371](https://doi.org/10.1002/mabi.202000371), PMID: 33615675, PMCID: PMC8126558

14. Vaneev AN, Kost OA, Ereemeev NL, Beznos OV, Alova AV, Gorelkin PV, Erofeev AS, Chesnokova NB, Kabanov AV, Klyachko NL (2021) Superoxide dismutase 1 nanoparticles (Nano-SOD1) as a potential drug for the treatment of inflammatory eye diseases. *Biomedicines*, 9(4), 396, DOI: [10.3390/biomedicines9040396](https://doi.org/10.3390/biomedicines9040396), PMID: 33917028, PMCID: PMC8067682

15. Vinod N, Hwang D, Azam SH, Van Swearingen AED, Wayne E, Fussell SC, Sokolsky-Papkov M, Pecot CV, Kabanov AV (2020) High-capacity poly(2-oxazoline) formulation of TLR 7/8 agonist extends survival in a chemo-insensitive, metastatic model of lung adenocarcinoma. *Sci Adv.* 6(25):eaba5542. doi: 10.1126/sciadv.aba5542. PMID: 32596460 PMCID: PMC7299629

16. Price LSL, Stern ST, Deal AM, Kabanov AV, Zamboni WC (2020) A reanalysis of nanoparticle tumor delivery using classical pharmacokinetic metrics. *Sci Adv.* 6(29):eaay9249. doi: 10.1126/sciadv.aay9249. PMID: 32832614 PMCID: PMC7439617

17. Shats I, Williams JG, Liu J, Makarov MV, Wu X, Lih FB, Deterding LJ, Lim C, Xu X, Randall TA, Lee E, Li W, Fan W, Li JL, Sokolsky M, Kabanov AV, Li L, Migaud ME, Locasale JW, Li X. (2020) Bacteria Boost Mammalian Host NAD Metabolism by Engaging the Deamidated Biosynthesis Pathway. *Cell Metab.* 31(3):564-579.e7. doi: 10.1016/j.cmet.2020.02.001. PMID: 32130883 PMCID: PMC7194078

18. Gopal T, Kumar N, Perriotte-Olson C, Casey CA, Donohue TM Jr, Harris EN, Talmon G, Kabanov AV, Saraswathi V (2020) Nanoformulated SOD1 ameliorates the combined NASH and alcohol-associated liver disease partly via regulating CYP2E1 expression in adipose tissue and liver. *Am. J. Physiol. Gastrointest. Liver Physiol.* 318(3):G428-G438. doi: 10.1152/ajpgi.00217.2019. PMID: 31928222 PMCID: PMC7099493

19. Haney MJ, Zhao Y, Fay J, Duhyeong H, Wang M, Wang H, Li Z, Lee YZ, Karuppan MK, El-Hage N, Kabanov AV, Batrakova EV (2020) Genetically modified macrophages accomplish targeted gene delivery to the inflamed brain in transgenic Parkin Q311X(A) mice: importance of administration routes. *Sci. Rep.* 10(1):11818. doi: 10.1038/s41598-020-68874-7. PMID: 32678262 PMCID: PMC7366622

20. Vlasova KY, Vishwasrao H, Abakumov MA, Golovin DY, Gribovsky SL, Zhigachev AO, Poloznikov AA, Majouga AG, Golovin YI, Sokolsky-Papkov M, Klyachko NL, Kabanov AV (2020) Enzyme release from polyion complex by extremely low frequency magnetic field. *Sci Rep.* 10(1):4745. doi: 10.1038/s41598-020-61364-w. PMID: 32179787 PMCID: PMC7076007

21. Vlasova KYu, Vanzarakshaeva SCh, Veselov MM, Le-Deygen IM, Petrunin AV, Prusov AN, Shuklinov AB, Golovin Yul, Kabanov AV, Klyachko NL (2020) Magnetic liposomes for remote controlled high-molecular drugs release under a low-frequency non-heating magnetic field. *Moscow Univ. Chem. Bull.* 75, 232–237. doi: 10.3103/S0027131420040112

22. Zhao Y, Alakhova DY, Zhao X, Band V, Batrakova EV, Kabanov AV. (2020) Eradication of cancer stem cells in triple negative breast cancer using Doxorubicin/Pluronic polymeric micelles. *Nanomedicine: Nanotechnology, Biology and Medicine.* 24:102124. doi: 10.1016/j.nano.2019.102124.

23. Haney MJ, Zhao Y, Jin YS, Li SM, Bago JR, Klyachko NL, Kabanov AV, Batrakova EV (2020) Macrophage-derived extracellular vesicles as drug delivery systems for triple negative breast cancer (TNBC) Therapy. *J. Neuroimmune Pharmacol.* 15, 487-500 doi: 10.1007/s11481-019-09884-9.

24. Alves VM, Hwang D, Muratov E, Sokolsky-Papkov M, Varlamova E, Vinod N, Lim C, Andrade CH, Tropsha A, Kabanov A (2019) Cheminformatics-driven discovery of polymeric micelle formulations for poorly soluble drugs. *Sci. Adv.* 5(6):eaav9784. doi: 10.1126/sciadv.aav9784. PMCID: PMC6594770

25. Haney MJ, Klyachko NL, Harrison EB, Zhao Y, Kabanov AV, Batrakova EV. (2019) TPP1 Delivery to Lysosomes with Extracellular Vesicles and their Enhanced Brain Distribution in the Animal Model of Batten Disease. *Adv Healthcare Mater.* 8(11):e1801271. doi: 10.1002/adhm.201801271. PMID: 30997751

26. Hu H, Petrosyan A, Osna NA, Liu T, Olou AA, Alakhova DY, Singh PK, Kabanov AV, Faber EA Jr, Bronich TK. (2019) Pluronic block copolymers enhance the anti-myeloma activity of proteasome inhibitors. *J Control Release*. pii: S0168-3659(19)30274-3. doi: 10.1016/j.jconrel.2019.05.026. PMID: 31121280
27. Hwang D, Ramsey JD, Makita N, Sachse C, Jordan R, Sokolsky-Papkov M, Kabanov AV (2019) Novel poly(2-oxazoline) block copolymer with aromatic heterocyclic side chains as a drug delivery platform. *J Control Release*. 307:261-271. doi: 10.1016/j.jconrel.2019.06.037.
28. Kobayashi E, Hwang D, Bheda-Malge A, Whitehurst CB, Kabanov AV, Kondo S, Aga M, Yoshizaki T, Pagano JS, Sokolsky M, Shakelford J (2019) Inhibition of UCH-L1 Deubiquitinating Activity with Two Forms of LDN-57444 Has Anti-Invasive Effects in Metastatic Carcinoma Cells. *Int J Mol Sci*. 20(15). pii: E3733. doi: 10.3390/ijms20153733. PMCID: PMC6696221
29. Le-Deygen IM, Vlasova KY, Kutsenok EO, Usvaliev AD, Efremova MV, Zhigachev AO, Rudakovskaya PG, Golovin DYu, Gribanovsky SL, Kudryashova EV, Majouga AG, Golovin YI, Kabanov AV, Klyachko NL (2019) Magnetic nanorods for remote disruption of lipid membranes by non-heating low frequency magnetic field, *Nanomedicine: Nanotechnology, Biology and Medicine* 21, 102065. doi: 10.1016/j.nano.2019.102065.
30. Natarajan G, Perriotte-Olson C, Casey CA, Donohue TM, Talmon GA, Harris EN, Kabanov AV, Saraswathi V (2019) Effect of nanoformulated copper/zinc superoxide dismutase on chronic ethanol-induced alterations in liver and adipose tissue. *Alcohol*. pii: S0741-8329 (18) 30250-7. doi: 10.1016/j.alcohol.2018.12.005.
31. Sokolsky-Papkov M, Kabanov A (2019) Synthesis of well-defined gold nanoparticles using Pluronic: The role of radicals and surfactants in nanoparticles formation, *Polymers* 11 (10), 1553. doi: 10.3390/polym11101553. PMCID: PMC6835800
32. Vlasova KY, Piroyan A, Le-Deygen IM, Vishwasrao HM, Ramsey JD, Klyachko NL, Golovin YI, Rudakovskaya PG, Kireev II, Kabanov AV, Sokolsky-Papkov M. (2019) Magnetic liposome design for drug release systems responsive to super-low frequency alternating current magnetic field (AC MF). *J Colloid Interface Sci*. 552:689-700. doi: 10.1016/j.jcis.2019.05.071. PMID: 31176052
33. Wan X, Beaudoin JJ, Vinod N, Min Y, Makita N, Bludau H, Jordan R, Wang A, Sokolsky M, Kabanov AV (2019) Co-delivery of paclitaxel and cisplatin in poly(2-oxazoline) polymeric micelles: Implications for drug loading, release, pharmacokinetics and outcome of ovarian and breast cancer treatments. *Biomaterials*. 192:1-14. doi: 10.1016/j.biomaterials.2018.10.032. Epub 2018 Oct 31.
34. Wayne EC, Long C, Haney MJ, Batrakova EV, Leisner TM, Parise LV, Kabanov AV (2019) Targeted Delivery of siRNA Lipoplexes to Cancer Cells Using Macrophage Transient Horizontal Gene Transfer. *Adv Sci*. 6(21):1900582. doi: 10.1002/advs.201900582. PMCID: PMC6839649
35. Zhao Y, Haney MJ, Jin YS, Uvarov O, Vinod N, Lee YZ, Langworthy B, Fine JP, Rodriguez M, El-Hage N, Kabanov AV, Batrakova EV (2019) GDNF-expressing macrophages restore motor functions at a severe late-stage, and produce long-term neuroprotective effects at an early-stage of Parkinson's disease in transgenic Parkin Q311X(A) mice. *J Control Release*. 2019 Dec 10;315:139-149. doi: 10.1016/j.jconrel.2019.10.027. PMCID: [PM6927551](https://pubmed.ncbi.nlm.nih.gov/31176052/)
36. Efremova MV, Veselov MM, Barulin AV, Gribanovsky SL, Le-Deygen IM, Uporov IV, Kudryashova EV, Sokolsky-Papkov M, Majouga AG, Golovin YI, Kabanov AV, Klyachko NL (2018) In Situ observation of chymotrypsin catalytic activity change actuated by nonheating low-frequency magnetic field. *ACS Nano*. 2018 12(4):3190-3199. doi: 10.1021/acsnano.7b06439. PMID: 29570975,
37. Golovin YI, Zhigachev AO, Klyachko NL, Kabanov AV (2018) Localizing the nanodeformation impact of magnetic nanoparticles on macromolecular objects by physical and biochemical means. *Bulletin of the Russian Academy of Sciences: Physics*, 82(9): 1073-1078.
38. Jiang Y, Fay JM, Poon C-D, Vinod N, Zhao Y, Bullock K, Qin S, Manickam DS, Yi X, Banks WA, Kabanov AV (2018) Nanoformulation of brain-derived neurotrophic factor with target receptor-triggered-release in the central nervous system, *Adv. Funct. Mater*. 2018, 28, 1703982 DOI: 10.1002/adfm.201703982 PMCID: PMC5958903

39. Kim MS, Haney MJ, Zhao Y, Yuan D, Deygen I, Klyachko NL, Kabanov AV, Batrakova EV. (2018) Engineering macrophage-derived exosomes for targeted paclitaxel delivery to pulmonary metastases: in vitro and in vivo evaluations. *Nanomedicine* 14(1):195-204. doi: 10.1016/j.nano.2017.09.011. PMID: PMC4809755
40. Kutsenok EO, Le-Deygen IM, Usvaliev AD, Haney MJ, Golovin Yu, Batrakova E, Kabanov A, Klyachko NL (2018) Controlled release of doxorubicin from magnetoliposomes under low-frequency magnetic field. *J Bioenerg Biomembranes*, 50 (6), 595-595
41. Nukolova NV, Aleksashkin AD, Abakumova TO, Morozova AY, Gubskiy IL, Kirzhanova EA, Abakumov MA, Chekhonin VP, Klyachko NL, Kabanov AV. (2018) Multilayer polyion complex nanoformulations of superoxide dismutase 1 for acute spinal cord injury. *J Control Release*. 270:226-236. doi: 10.1016/j.jconrel.2017.11.044. PMID: 29196042
42. Vlasova KYu, Abakumova TO, Melnikov PA, Golovin Yu, Kabanov A, Markvicheva EA, Klyachko NL (2018) Controlled release of doxorubicin from magnetoliposomes under low-frequency magnetic field. *J Bioenerg Biomembranes* 50 (6) 595-595.
43. Wan X, Min Y, Bludau H, Keith A, Sheiko SS, Jordan R, Wang AZ, Sokolsky-Papkov M, Kabanov AV (2018) Drug combination synergy in worm-like polymeric micelles improves treatment outcome for small cell and non-small cell lung cancer. *ACS Nano*. 12(3):2426-2439. doi: 10.1021/acsnano.7b07878. PMID: PMC5960350.
44. Golovin YI, Gribovsky SL, Golovin DY, Zhigachev AO, Klyachko NL, Majouga AG, Sokolsky M, Kabanov AV (2017) The dynamics of magnetic nanoparticles exposed to non-heating alternating magnetic field in biochemical applications: theoretical study. *J. Nanoparticle Research*, 19 (2): 59. <https://doi.org/10.1007/s11051-017-3753-6>
45. Golovin YI, Golovin DY, Klyachko NL, Majouga AG, Kabanov AV (2017) Modeling drug release from functionalized magnetic nanoparticles actuated by non-heating low frequency magnetic field. *J. Nanoparticle Research*, 19: 64. doi: 10.1007/s11051-017-3754-5
46. Efremenko EN, Lyagin IV, Klyachko NL, Bronich T, Zavyalova NV, Jiang Y, Kabanov AV (2017) A simple and highly effective catalytic nanozyme scavenger for organophosphorus neurotoxins. *J. Control. Release*, 247(10), 175–81 doi: 10.1016/j.jconrel.2016.12.037
47. Klyachko NL, Polak R, Haney MJ, Zhao Y, Gomes Neto RJ, Hill MC, Kabanov AV, Cohen RE, Rubner MF, Batrakova EV (2017) Macrophages with cellular backpacks for targeted drug delivery to the brain. *Biomaterials*. 140:79-87. doi: 10.1016/j.biomaterials.2017.06.017.
48. Lucas AT, Herity LB, Kornblum ZA, Madden AJ, Gabizon A, Kabanov AV, Ajamie RT, Bender DM, Kulanthaivel P, Sanchez-Felix MV, Havel HA, Zamboni WC (2017) Pharmacokinetic and screening studies of the interaction between mononuclear phagocyte system and nanoparticle formulations and colloid forming drugs. *Int J Pharm*. 526(1-2):443-454. doi: 10.1016/j.ijpharm.2017.04.079.
49. Natarajan G, Perriotte-Olson C, Bhinderwala F, Powers R, Desouza CV, Talmon GA, Yuhang J, Zimmerman MC, Kabanov AV, Saraswathi V (2017) Nanoformulated copper/zinc superoxide dismutase exerts differential effects on glucose vs lipid homeostasis depending on the diet composition possibly via altered AMPK signaling. *Transl Res*. pii: S1931-5244(16)30488-1. doi: 10.1016/j.trsl.2017.08.002. PMID: 28867395
50. Yuan D, Yi X, Zhao Y, Poon CD, Bullock KM, Hansen KM, Salameh TS, Farr SA, Banks WA, Kabanov AV (2017) Intranasal delivery of N-terminal modified leptin-pluronic conjugate for treatment of obesity. *J. Control. Release*. 2017 Oct 10;263:172-184. doi: 10.1016/j.jconrel.2017.03.029. PMID: PMC5603367
51. Yuan D, Zhao Y, Banks WA, Bullock KM, Haney M, Batrakova E, Kabanov AV (2017) Macrophage exosomes as natural nanocarriers for protein delivery to inflamed brain. *Biomaterials*. 142:1-12. doi: 10.1016/j.biomaterials.2017.07.011. PMID: PMC5603188
52. Abakumova T, Abakumov M, Shein S, Chelushkin P, Bychkov D, Mukhin V, Yusubalieva G, Grinenko N, Kabanov A, Nukolova N, Chekhonin V. (2016) Connexin 43-targeted T1 contrast agent for MRI diagnosis of glioma. *Contrast Media Mol Imaging*. 11(1):15-23 doi: 10.1002/cmim.1653.

53. He Z, Wan X, Schulz A, Bludau H, Dobrovolskaia MA, Stern ST, Montgomery SA, Yuan H, Li Z, Alakhova D, Sokolsky M, Darr DB, Perou CM, Jordan R, Luxenhofer R, Kabanov AV (2016) A high capacity polymeric micelle of paclitaxel: Implication of high dose drug therapy to safety and in vivo anti-cancer activity. *Biomaterials*. 101:296-309. doi: 10.1016/j.biomaterials.2016.06.002. PMID: [PMC5035646](#)
54. Jiang Y, Arounleut P, Rheiner S, Bae Y, Kabanov AV, Milligan C, Manickam DS (2016) SOD1 nanozyme with reduced toxicity and MPS accumulation. *J. Control. Release* 231:38-49. doi: 10.1016/j.jconrel.2016.02.038..
55. Harris NM, Ritzel R, Mancini N, Jiang Y, Yi X, Manickam DS, Banks WA, Kabanov AV, McCullough LD, Verma R. (2016) Nano-particle delivery of brain derived neurotrophic factor after focal cerebral ischemia reduces tissue injury and enhances behavioral recovery. *Pharmacol Biochem Behav.* 150-151:48-56. doi: 10.1016/j.pbb.2016.09.003. PMID: PMC5145740
56. Kim MS, Haney MJ, Zhao Y, Mahajan V, Deygen I, Klyachko NL, Inskoe E, Piroyan A, Sokolsky M, Okolie O, Hingtgen SD, Kabanov AV, Batrakova EV. (2016) Development of exosome-encapsulated paclitaxel to overcome MDR in cancer cells. *Nanomedicine*. 12(3):655-64. pii: S1549-9634(15)00202-6. doi: 10.1016/j.nano.2015.10.012. PMID: PMC4809755
57. Kost OA, Beznos OV, Davydova NG, Manickam DS, Nikolskaya II, Guller AE, Binevski PV, Chesnokova NB, Shekhter AB, Klyachko NL, Kabanov AV (2016) Superoxide Dismutase 1 Nanozyme for Treatment of Eye Inflammation, *Oxid Med Cell Longev*, 2016:5194239. doi: 10.1155/2016/5194239.
58. Lang PY, Nanjangud GJ, Sokolsky-Papkov M, Shaw C, Hwang D, Parker JS, Kabanov AV, Gershon TR (2016) ATR maintains chromosomal integrity during postnatal cerebellar neurogenesis and is required for medulloblastoma formation, *Development*, 142(21): 4038-52 doi:10.1242/dev.139022
59. Mahajan V, Gaymalov Z, Alakhova D, Gupta R, Zucker IH, Kabanov AV (2016) Horizontal gene transfer from macrophages to ischemic muscles upon delivery of naked DNA with Pluronic block copolymers, *Biomaterials* 75:58-70. doi: 10.1016/j.biomaterials.2015.10.002. PMID: PMC4644506
60. Master AM, Williams PN, Pothayee N, Pothayee N, Zhang R, Vishwasrao HM, Golovin YI, Riffle JS, Sokolsky M, Kabanov AV. (2016) Remote Actuation of magnetic nanoparticles for cancer cell selective treatment through cytoskeletal disruption. *Sci Rep*. 6:33560. doi: 10.1038/srep33560. PMID: PMC5028756
61. Perriotte-Olson C, Adi N, Manickam DS, Westwood RA, Desouza CV, Natarajan G, Crook A, Kabanov AV, Saraswathi V (2016) Nanoformulated copper/zinc superoxide dismutase reduces adipose inflammation in obesity. *Obesity* 24(1):148-56. doi: 10.1002/oby.21348.
62. Saraswathi V, Ganesan M, Perriotte-Olson C, Manickam DS, Westwood RA, Zimmerman MC, Ahmad IM, Desouza CV, Kabanov AV (2016) Nanoformulated copper/zinc superoxide dismutase attenuates vascular cell activation and aortic inflammation in obesity. *Biochem. Biophys. Res. Commun.* 469(3):495-500. doi: 10.1016/j.bbrc.2015.12.027.
63. Shein SA, Kuznetsov II, Abakumova TO, Chelushkin PS, Melnikov PA, Korchagina AA, Bychkov DA, Seregina IF, Bolshov MA, Kabanov AV, Chekhonin VP, Nukolova NV. (2016) VEGF- and VEGFR2-targeted liposomes for cisplatin delivery to glioma cells. *Mol. Pharm.* 13(11):3712-23.
64. Vishwasrao HM, Master AM, Seo YG, Liu XM, Pothayee N, Zhou Z, Yuan D, Boska MD, Bronich TK, Davis RM, Riffle JS, Sokolsky-Papkov M, Kabanov AV (2016) Luteinizing hormone releasing hormone-targeted cisplatin-loaded magnetite nanoclusters for simultaneous MR imaging and chemotherapy of ovarian cancer. *Chem. Mater.* 28(9):3024-40 doi: 10.1021/acs.chemmater.6b00197.
65. Abakumov MA, Nukolova NV, Sokolsky-Papkov M, Shein SA, Sandalova TO, Vishwasrao HM, Grinenko NF, Gubsky IL, Abakumov AM, Kabanov AV, Chekhonin VP (2015) VEGF-targeted magnetic nanoparticles for MRI visualization of brain tumor. *Nanomedicine*. 11(4):825-33. doi: 10.1016/j.nano.2014.12.011.
66. Baklaushev VP, Nukolova NV, Khalansky AS, Gurina OI, Yusubalieva GM, Grinenko NP, Gubskiy IL, Melnikov PA, Kardashova KS, Kabanov AV, Chekhonin VP (2015) Treatment of glioma by cisplatin-loaded nanogels conjugated with monoclonal antibodies against Cx43 and BSAT1, *Drug Delivery* 22(3):276-85

67. Filatova LY, Donovan DM, Foster-Frey J, Pugachev VG, Dmitrieva NF, Chubar TA, Klyachko NL, Kabanov AV (2015) Bacteriophage phi11 lysin: Physicochemical characterization and comparison with phage phi80 α lysine. *Enzyme Microb Technol.* 2015 Jun;73-74:51-8. doi: 10.1016/j.enzmictec.2015.03.005.
68. Golovin YI, Klyachko NL, Gribovskii SL, Golovin DYu, Samodurov AA, Majouga AG, Sokolsky-Papkov M, Kabanov AV (2015) Nanomechanical control of properties of biological membranes achieved by rodlike magnetic nanoparticles in a superlow-frequency magnetic field. *Technical Physics Letters* 41(5):455-457.
69. Haney MJ, Klyachko NL, Zhao Y, Gupta R, Plotnikova EG, He Z, Patel T, Piroyan A, Sokolsky M, Kabanov AV, Batrakova EV (2015) Exosomes as drug delivery vehicles for Parkinson's disease therapy. *J. Control Release* 207:18-30. doi: 10.1016/j.jconrel.2015.03.033. PMID: [PMC4430381](#)
70. He Z, Schulz A, Wan X, Seitz J, Bludau H, Alakhova DY, Darr DB, Perou CM, Jordan R, Ojima I, Kabanov AV, Luxenhofer R. (2015) Poly(2-oxazoline) based micelles with high capacity for 3rd generation taxoids: preparation, in vitro and in vivo evaluation. *J Control Release.* 208:67-75. doi: 10.1016/j.jconrel.2015.02.024. PMID: PMC4479148
71. He Z, Miao L, Jordan R, Manickam DS, Luxenhofer R, Kabanov AV (2015) A Low protein binding cationic poly(2-oxazoline) as non-viral vector. *Macromol Biosci.* 15(7):1004-20. doi: 10.1002/mabi.201500021. DOI: [10.1002/mabi.201500021](#) PMID: [PMC4893346](#)
72. Jiang Y, Brynskikh AM, Manickam DS, Kabanov AV (2015) SOD1 nanozyme salvages ischemic brain by locally protecting cerebral vasculature, *J Control Release*, 213:36-44. doi: 10.1016/j.jconrel.2015.06.021 PMID: PMC4684498
73. Majouga A, Sokolsky-Papkov M, Kuznetsov A, Lebedev D, Efremova M, Beloglazkina E, Rudakovskaya P, Veselov M, Zyk N, Golovin Y, Klyachko N, Kabanov A. (2015) Enzyme-functionalized gold-coated magnetite nanoparticles as novel hybrid nanomaterials: Synthesis, purification and control of enzyme function by low-frequency magnetic field. *Colloids Surf B Biointerfaces.* 125:104-9. doi: 10.1016/j.colsurfb.2014.11.012. PMID: 25460600
74. Rudakovskaya PG, Beloglazkina EK, Majouga AG, Klyachko NL, Kabanov AV, Zyk NV (2015) Synthesis of magnetite-gold nanoparticles with core-shell structure. *Moscow University Chemistry Bulletin*, 70(3):149-156
75. Semkina A, Abakumov M, Grinenko N, Abakumov A, Skorikov A, Mironova E, Davydova G, Majouga AG, Nukolova N, Kabanov A, Chekhonin V (2015) Core-Shell-Corona Doxorubicin-Loaded Superparamagnetic Fe₃O₄ Nanoparticles for Cancer Theranostics, *Colloids and Surfaces B: Biointerfaces*, 136:1073-80. doi: 10.1016/j.colsurfb.2015.11.009.
76. Seo Y, Schulz A, Han Y, He Z, Bludau H, Wan X, Tong J, Bronich TK, Sokolsky M, Luxenhofer R, Jordan R, Kabanov AV (2015) Poly (2-oxazoline) block copolymer based formulations of taxanes: effect of copolymer and drug structure, concentration, and environmental factors, *J Polymers Adv Technologies*, 26 (7), 837-50. DOI: 10.1002/pat.3556
77. Baklaushev, V.P., Nukolova, N.N., Khalansky, A.S., Gurina, O.I., Yusubalieva, G.M., Grinenko, N.P., Gubskiy, I.L., Melnikov, P.A., Kardashova, K.S., Kabanov, A.V., Chekhonin, V.P. (2014) Treatment of glioma by cisplatin-loaded nanogels conjugated with monoclonal antibodies against Cx43 and BSAT1. *Drug Deliv.* PMID: 24437962
78. Golovin, Y.I., Gribovskii, S.L, Klyachko, N.L., Kabanov, A.V. (2014) Nanomechanical control of the activity of enzymes immobilized on single-domain magnetic nanoparticles, *Technical Physics* 59 (6), 932-935 (Головин, Ю.И., Грибановский, С.Л., Клячко, Н.Л., Кабанов А.В. Наномеханическое управление активностью ферментов, иммобилизованных на однодоменных магнитных наночастицах. *Журнал технической физики*, 2014, том 84, вып. 6, с. 147-150.)
79. Golovin, Y.I., Gribovskii, S.L, Golovin, D.Y., Klyachko, N.L., Kabanov, A.V. (2014) Single-domain magnetic nanoparticles in an alternating magnetic field as mediators of local deformation of the surrounding macromolecules, *Physics of the Solid State* 56 (7), 1342-1351 (Головин, Ю.И., Грибановский, С.Л., Головин, Д.Ю., Клячко, Н.Л., Кабанов А.В. Однодоменные магнитные наночастицы в переменном магнитном поле

- как медиаторы локальной деформации окружающих макромолекул. *Физика твердого тела*, 2014, том 56, вып. 7, с. 1292-1300.)
80. Falcone, J.A., Salameh, T.S., Yi, X., Cordy, B.J., Mortell, W.G., Kabanov, A.V., Banks, W.A. (2014) Intranasal administration as a route for drug delivery to the brain: evidence for a unique pathway for albumin. *J Pharmacol. Exp. Ther.* 351(1):54-60. doi: 10.1124/jpet.114.216705. PMID: PMC4165023
81. Filatova, L.Yu., Donovan, D.M., Becker, S.C., Priyma, A.D., Kabanov, A.V., Klyachko, N.L. (2014) An investigation of the structure and function of antistaphylococcal endolysins using kinetic methods. *Moscow University Chemistry Bulletin* 69 (3), 107-111.
82. Klyachko, N.L., Haney, M.J., Zhao, Y., Manickam, D.S., Mahajan, V., Suresh, P., Hingtgen, S.D., Mosley, R.L., Gendelman, H.E., Kabanov, A.V., Batrakova, E.V. (2014) Macrophages offer a paradigm switch for CNS delivery of therapeutic proteins. *Nanomedicine (Lond)*. 9(9):1403-22. doi: 10.2217/nnm.13.115. PMID: PMC4025996
83. Legotsky, S.A., Vlasova, K.Y., Priyma, A.D., Shneider, M.M., Pugachev, V.G., Totmenina, O.D., Kabanov, A.V., Miroshnikov, K.A., Klyachko, N.L. (2014) Peptidoglycan degrading activity of the broad-range Salmonella bacteriophage S-394 recombinant endolysin. *Biochimie*. 2014 Sep 18. pii: S0300-9084(14)00266-1. doi: 10.1016/j.biochi.2014.09.017. PMID: 25241254
84. Lyagin, I.V., Efremenko, E.N., Kabanov A.V. (2014) Catalytic characteristics of enzyme-polyelectrolyte complexes based on hexahistidine-containing organophosphorus hydrolase, *Moscow University Chemistry Bulletin* 69 (3), 125-130
85. Majouga, A.G., Zvereva, M.I., Rubtsova, M.P., Skvortsov, D.A., Mironov, A.V., Azhibek, D.M., Krasnovskaya, O.O., Gerasimov, V.M., Udina, A.V., Vorozhtsov, N.I., Beloglazkina, E.K., Agron, L.A., Mikhina, L.V., Tretyakova, A.V., Zyk, N.V., Zefirov, N.S., Kabanov, A.V., Dontsova, O.A. (2014) Mixed valence copper (I,II) binuclear complexes with unexpected structure: synthesis, biological properties and anticancer activity. *57 (14)*, 6252-8. doi: 10.1021/jm500154f PMID: 24950478
86. Nukolova, N.V., Baklaushev, V.P., Abakumova, T.O., Mel'nikov, P.A., Abakumov, M.A., Yusubaliev, G.M., Bychkov, D.A., Kabanov, A.V., Chekhonin, V.P. (2014) Targeted delivery of cisplatin by connexin 43 vector nanogels to the focus of experimental glioma C6. *Bull Exp Biol Med*. 157 (4), 524-9. doi: 10.1007/s10517-014-2606-x. PMID: 25110098
87. Panina, I.S., Filatova, L.Y., Kabanov, A.V., Klyachko, N.L. (2014) An investigation of the physicochemical properties of both glutathione peroxidase I and its complexes with polyelectrolytes as promising agents for the treatment of diseases of the central nervous system. *Moscow University Chemistry Bulletin* 69 (3), 112-116
88. Savalia, K., Manickam, D.S., Rosenbaugh, E.G., Tian, J., Ahmad, I.M., Kabanov, A.V., Zimmerman, M.C. (2014) Neuronal uptake of nanoformulated superoxide dismutase and attenuation of angiotensin II-dependent hypertension after central administration. *Free Radic. Biol. Med.* 73:299-307. doi: 10.1016/j.freeradbiomed.2014.06.001. PMID: PMC4116739
89. Schulz, A., Jaksch, S., Schubel, R., Wegener, E., Di, Z., Han, Y., Meister, A., Kressler, J., Kabanov, A.V., Luxenhofer, R., Papadakis, C.M., Jordan R. (2014) Drug-induced morphology switch in drug delivery systems based on poly(2-oxazoline)s. *ACS Nano* 8 (3), 2686–96. DOI: 10.1021/nn406388t PMID: PMC4004286
90. Yi, X., Yuan, D., Farr, S.A., Banks, W.A., Poon, C.D., Kabanov, A.V. (2014) Pluronic modified leptin with increased systemic circulation, brain uptake and efficacy for treatment of obesity. *J. Control. Release.* 191, 34-46 doi: 10.1016/j.jconrel.2014.05.044. PMID: PMC4197010
91. Zhao, Y., Haney, M.J., Gupta, R., Bohnsack, J.P., He, Z., Kabanov, A.V., Batrakova, E.V. (2014) GDNF-transfected macrophages produce potent neuroprotective effects in Parkinson's disease mouse model. *PLoS One*. 9(9):e106867. doi: 10.1371/journal.pone.0106867. eCollection 2014. PMID: PMC4167552
92. Alakhova, D.Y., Zhao, Y., Li, S., Kabanov, A.V. (2013) Effect of doxorubicin/Pluronic SP1049C on tumorigenicity, aggressiveness, DNA methylation and stem cell markers in murine leukemia. *PLoS ONE* 8(8): e72238. doi:10.1371/journal.pone.0072238, PMID: PMC3747131

93. Desale, S.S., Cohen, S.M., Zhao, Y., Kabanov A.V., Bronich T.K. (2013) Biodegradable hybrid polymer micelles for combination drug therapy in ovarian cancer. *J. Control. Release* 171 (3), 339-348. doi:pii: S0168-3659(13)00245-9. 10.1016/j.jconrel.2013.04.026
94. Filatova, L.Y., Donovan, D.M., Becker, S.C., Lebedev, D.N., Priyma, A.D., Koudriachova, H.V., Kabanov, A.V., Klyachko, N.L. (2013) Physicochemical characterization of the staphylolytic LysK enzyme in complexes with polycationic polymers as a potent antimicrobial. *Biochimie* 95(9):1689-96. doi: 10.1016/j.biochi.2013.04.013
95. Golovin, Yu.I., Klyachko, N.L., Golovin, D.Yu., Efremova, M.V., Samodurov, A.A., Sokolski-Papkov, M., Kabanov, A.V. (2013) A new approach to the control of biochemical reactions in a magnetic nanosuspension using a low-frequency magnetic field. *Technical Physics Lett.* 39(3), 240-3 English, Russian (Головин, Ю.И., Клячко, Н.Л., Головин, Д.Ю., Ефремова, М.В., Самодуров, А.А., Сокольски-Папков, М., Кabanov, A.V. Новый подход к управлению биохимическими реакциями в магнитной наносуспензии с помощью низкочастотного магнитного поля. Письма в ЖТФ, 2013, том 39, вып. 5, с. 105 – 109).
96. Golovin, Yu.I., Klyachko, N.L., Sokolsky-Papkov, M., Kabanov A.V. (2013) Single-domain magnetic nanoparticles as force generators for the nanomechanical control of biochemical reactions by low-frequency magnetic fields. *Bulletin of the Russian Academy of Sciences: Physics* 77 (11), 1350-1359 (Головин, Ю.И., Клячко, Н.Л., Сокольски-Папков, М., Кabanov, A.V. Однодоменные магнитные наночастицы как генераторы силы для наномеханического управления биохимическими реакциями низкочастотным магнитным полем. Известия РАН. Серия физическая, 2013, том 77, № 11, с. 1621–1630).
97. Haney, M.J., Zhao, Y., Harrison, E.B., Mahajan, V., Ahmed, S., He, Z., Suresh, P., Hingtgen, S.D., Klyachko, N.L., Mosley, R.L., Gendelman, H.E., Kabanov, A.V., Batrakova, E.V. (2013) Specific transfection of inflamed brain by macrophages: A new therapeutic strategy for neurodegenerative diseases. *PLoS ONE* 8(4): e61852. doi:10.1371/journal.pone.0061852 PMID: PMC3631190.
98. Kim, J.O., Ramasamy, T., Yong, C.S., Nukolova, N.V., Bronich, T.K., Kabanov, A.V. (2013) Cross-linked polymeric micelles based on block ionomer complexes. *Mendeleev Comm.* 23(4), 179-86.
99. Kim, J.O., Oberoi, H.S., Desale, S., Kabanov, A.V., Bronich, T.K. (2013) Polypeptide nanogels with hydrophobic moieties in the cross-linked ionic cores: synthesis, characterization and implications for anticancer drug delivery, *J. Drug Targeting* 21 (10), 981-993
100. Nukolova, N.V., Oberoi, H.S., Zhao, Y., Chekhonin, V.P., Kabanov, A.V., Bronich, T.K. (2013) LHRH-targeted nanogels as delivery system for cisplatin to ovarian cancer. *Mol. Pharm.* 10 (10), 3913-21. doi: 10.1021/mp4003688 PMID: PMC3809768.
101. Pechenkin, M.A., Balabushevich, N.G., Zorov, I.N., Izumrudov, V.A., Klyachko, N.L., Kabanov, A.V., Larionova, N.I. (2013) Use of protease inhibitors in composite polyelectrolyte microparticles in order to increase the bioavailability of perorally administered encapsulated proteins. *Pharmaceutical Chem. J.* 47(1) 62-9.
102. Puligujja, P., McMillan, J., Kendrick, L., Li, T., Balkundi, S., Smith, N., Veerubhotla, R.S., Edagwa, B.J., Kabanov, A.V., Bronich, T., Gendelman H.E., Liu X.-M. (2013) Macrophage folate receptor-targeted antiretroviral therapy facilitates drug entry, retention, antiretroviral activities and biodistribution for reduction of human immunodeficiency virus infections. *Nanomedicine: Nanotechnology, Biology and Medicine*, 9 (8), 1263-73. pii: S1549-9634(13)00188-3. doi: 10.1016/j.nano.2013.05.003.
103. Tong, J., Yi, X., Luxenhofer, R., Banks, W.A., Jordan, R., Zimmerman, M.C., Kabanov, A.V. (2013) Conjugates of superoxide dismutase 1 with amphiphilic poly(2-oxazoline) block copolymers for enhanced brain delivery: synthesis, characterization and evaluation in vitro and in vivo. *Mol. Pharm.* 10(1):360-77. doi: 10.1021/mp300496x. PMID: PMC3570234
104. Zhao, Y., Alakhova, D.Y., Kim, J.O., Bronich, T.K., and Kabanov, A.V. (2013) A simple way to enhance Doxil therapy: Drug release from liposomes at the tumor site by amphiphilic block copolymer, *J. Control. Release*, 168(1):61-9. doi:pii: S0168-3659(13)00123-5. 10.1016/j.jconrel.2013.02.026. PMID: PMC3661699
105. Abakumov, M.A., Grinenko, N.F., Baklaushev, V.P., Sandalova, T.O., Nukolova, N.V., Semyonova, A.V., Sokolski-Papkov, M., Vishvasrao, H., Kabanov, A.V., Chekhonin, V.P. (2012) Tumor-specific contrast agent based on ferric oxide superparamagnetic nanoparticles for visualization of gliomas by magnetic resonance

tomography. *Bull. Exp. Biol. Med.* 153(1): 89-93. English, Russian (Абакумов М.А., Гриненко Н.Ф., В.П. Баклаушев, Т.О. Сандалова, Н.В. Нуколова, А.В. Семенова, М. Сокольски-Папков, Х. Вишвасрао, А.В. Кабанов, В.П. Чехонин. Опухоль-специфичный контрастный агент на основе суперпарамагнитных наночастиц оксида железа для визуализации глиом методом магнито-резонансной томографии. Бюллетень экспериментальной биологии и медицины. 2012, 153 (1), 101-106.).

106. Abakumov, M.A., Shein, S.A., Vishvasrao, H., Nukolova, N.V., Sokolski-Papkov, M., Sandalova, T.O., Gubskii, I.L., Grinenko, N.F., Kabanov, A.V., Chekhonin, V.P. (2012) Visualization of experimental glioma C6 by MRI with magnetic nanoparticles conjugated with monoclonal antibodies to vascular endothelial growth factor. *Bull. Exp. Biol. Med.* 154(2):274-7. English, Russian (Абакумов М.А., Шеин С.А., Вишвасрао Х., Нуколова Н.В., Сокольски-Папков М., Сандалова Т.О., Губский И.Л., Гриненко Н.Ф., Кабанов А.В., Чехонин В.П. Визуализация экспериментальной глиомы C6 методом МРТ с помощью магнитных наночастиц, конъюгированных с моноклональными антителами к фактору роста эндотелия сосудов. Бюллетень экспериментальной биологии и медицины. 2012, 154 (8), 242-246.) PMID: 23474033

107. Doğan, A., Yalvaç, M.E., Sahin, F., Kabanov, A.V., Palotás, A., Rizvanov, A.A. (2012) Differentiation of human stem cells is promoted by amphiphilic pluronic block copolymers. *Int. J. Nanomedicine*, 7:4849-60. doi: 10.2147/IJN.S31949. PMID: PMC3441230

108. Gudkov, D.A., Lyagin, I.V., Efremenko, E.N., Kabanov, A.V. (2012) Effect of dimerization on the catalytic properties of native and chimeric organophosphorus hydrolase determined by molecular modeling of the enzyme structure, *Russian Chemical Bulletin, International Edition*, 61, (2) 449-55 English, Russian. (Гудков, Д.А., Лягин, И.В., Ефременко, Е.Н., Кабанов, А.В. Влияние димеризации на каталитические свойства нативной и химерной органофосфатгидролазы, определяемое молекулярным моделированием структуры фермента. Россия, г. Москва, Известия академии наук - Серия химическая. 2012, № 2, 445-52. Russian.)

109. Han, Y., He, Z., Schulz, A., Bronich, T.K., Jordan, R., Luxenhofer, R., Kabanov, A.V. (2012) Synergistic combinations of multiple chemotherapeutic agents in high capacity poly(2-oxazoline) micelles. *Mol. Pharm.* 9 (8): 2302–13 PMID: PMC3534837

110. Haney, M.J., Suresh, P., Zhao, Y., Kanmogne, G.D., Kadiu, I., Sokolsky-Papkov, M., Klyachko, N.L., Mosley, R.L., Kabanov, A.V., Gendelman, H.E., Batrakova, E.V. (2012) Blood-borne macrophage-neural cell interactions hitchhike on endosome networks for cell-based nanozyme brain delivery. *Nanomedicine (Lond)* 7(6): 815-33. PMID: PMC3384770

111. Kamimura, M., Kim, J.O., Kabanov, A.V., Bronich, T.K., Nagasaki, Y. (2012) Block ionomer complexes of PEG-block-poly(4-vinylbenzylphosphonate) and cationic surfactants as highly stable, pH responsive drug delivery system. *J. Control. Release* 160(3):486-94.

112. Kanmogne, G.D., Singh, S., Roy, U., Liu, X., McMillan, J., Gorantla, S., Balkundi, S., Smith, N., Alnouti, Y., Gautam, N., Zhou, Y., Poluektova, L., Kabanov, A., Bronich, T., Gendelman, H.E. (2012) Mononuclear phagocyte intercellular crosstalk facilitates transmission of cell-targeted nanoformulated antiretroviral drugs to human brain endothelial cells. *Int. J. Nanomedicine* 7:2373-88. PMID: PMC3357981

113. Klyachko, N.L., Manickam, D.S., Brynskikh, A.M., Uglanova, S.V., Li, S., Higginbotham, S.M., Bronich, T.K., Batrakova, E.V., Kabanov, A.V. (2012) Cross-linked antioxidant nanozymes for improved delivery to CNS, *Nanomedicine: Nanotechnology, Biology and Medicine*. 8(1):119-29. PMID: PMC3255173

114. Klyachko N.L., Sokolsky-Papkov M., Pothayee N., Efremova M.V., Gulin D.A., Pothayee N., Kuznetsov A.A., Majouga A.G., Riffle J.S., Golovin Y.I., Kabanov A.V. (2012) Changing the enzyme reaction rate in magnetic nanosuspensions by a non-heating magnetic field. *Angew. Chem. Int. Ed. Engl.* 51 (48):12016-9. doi: 10.1002/anie.201205905. PMID: PMC3571765

115. Luxenhofer, R., Han, Y., Schulz, A., Tong, J., He, Z., Kabanov, A.V., Jordan R. (2012) Poly(2-oxazoline)s as polymer therapeutics. *Macromol. Rapid Commun.*, 33:1613-31. doi: 10.1002/marc.201200354. PMID: PMC3608391

116. Manickam, D.S., Brynskikh, A.M., Kopanic, J.L., Sorgen, P.L., Klyachko, N.L., Batrakova E.V., Bronich T.K., Kabanov A.V. (2012) Well-defined cross-linked antioxidant nanozymes for treatment of ischemic brain injury. *J. Control. Release* 162(3):636-645. doi: [10.1016/j.jconrel.2012.07.044](https://doi.org/10.1016/j.jconrel.2012.07.044) PMID: PMC3631190

117. Oberoi, H.S., Nukolova, N.V., Laquer, F.C., Poluektova, L.Y., Huang, J., Alnouti, Y., Yokohira, M., Arnold, L.L., Kabanov, A.V., Cohen, S.M., Bronich, T.K. (2012) Cisplatin-loaded core cross-linked micelles: comparative pharmacokinetics, antitumor activity, and toxicity in mice. *Int. J. Nanomedicine* 7: 2557-71. PMID: PMC3383348
118. Oberoi, H.S., Nukolova, N.V., Zhao, Y., Cohen, S.M., Kabanov, A.V., Bronich, T.K. (2012) Preparation and *in vivo* evaluation of dichloro(1,2-diaminocyclohexane)platinum(II)-loaded core cross-linked polymer micelles. *Chemother. Res. Pract.* 2012; 2012: 905796. doi:10.1155/2012/905796 PMID: PMC3403332
119. Shimanovskaia, E.V., Beznos, O.V., Kliachko, N.L., Kost, O.A., Nikol'skaia, I.I., Pavlenko, T.A., Chesnokova, N.B., Kabanov, A.V. (2012) [Production of timolol containing calcium-phosphate nanoparticles and evaluation of their effect on intraocular pressure in experiment.] *Vestn. Oftalmol.* 128(3):15-8. Russian (Шимановская Е.В., Безнос О.В., Клячко Н.В., Кост О.А., Никольская И.И., Павленко Т.А., Чеснокова Н.Б., Кабанов А.В. Получение кальций-фосфатных наночастиц, содержащих тимолол, и оценка их влияния на внутриглазное давление в эксперименте. Россия, Москва, Вестник офтальмологии 2012, №3, 15-18).
120. Dmitrieva, N.F., Kliachko, N.L., Bondarenko, V.M., Shabanova, N.A., Eshchina, A.S., Filatova, L.I., Morozova, N.I., Timofeev, Iu.M., Kabanov, A.V., Briko, N.I. (2011) [Development of *Streptococcus pyogenes* cells inactivation for turbidimetric determination of bacteriolytic activity of phage-associated enzyme] *Zh. Mikrobiol. Epidemiol. Immunobiol.* 6:14-9. Russian (Дмитриева Н.Ф., Клячко Н.Л., Бондаренко В.М., Шабанова Н.А., Ещина А.С., Филатова Л.Ю., Морозова Н.И., Тимофеев Ю.М., Кабанов А.В., Брико Н.И. Разработка метода инактивации клеток *Streptococcus pyogenes* для турбидиметрического определения бактериолитической активности фаг-ассоциированного фермента, Журнал микробиологии, эпидемиологии и иммунобиологии. 2011, 6, 14-19.).
121. Haney, M.J., Zhao, Y., Li, S., Higginbotham, S.M., Booth, S.L., Han, H.-Y., Vetro, J.A., Mosley, R.L., Kabanov, A.V., Gendelman, H.E., Batrakova, E.V. (2011) Cell-mediated transfer of catalase nanoparticles from macrophages to brain endothelial, glial and neuronal cells: Implications for nanomedicine drug delivery to the central nervous system, *Nanomedicine (Lond)* 6(7):1215-30. PMID: PMC3166447
122. Luxenhofer, R., Sahay, G., Schulz, A., Alakhova, D., Bronich, T.K., Jordan, R., Kabanov, A.V. (2011) Structure-property relationship in cytotoxicity and cell uptake of poly(2-oxazoline) amphiphiles, *J. Control. Release* 153(1):73-82. PMID: PMC3134160
123. Nukolova, N.V., Yang, Z., Kim, J.O., Kabanov, A.V., Bronich, T.K. (2011) Polyelectrolyte nanogels decorated with monoclonal antibody for targeted drug delivery, *Reactive & Functional Polymers* 71(3):315-323. PMID: PMC3077768
124. Nukolova, N.V., Oberoi, H.S., Kabanov, A.V., Bronich, T.K. (2011) Folate-decorated nanogels for targeted therapy of ovarian cancer, *Biomaterials* 32(23):5417-26. PMID: PMC3255291
125. Oberoi, H.S., Laquer, F.C., Marky, L.A., Kabanov, A.V., Bronich, T.K. (2011) Core cross-linked block ionomer micelles as pH-responsive carriers for cis-diamminedichloroplatinum(II). *J. Control. Release* 153(1):64-72. PMID: PMC3134139
126. Tong, J., Zimmerman, M.C., Li, S., Yi, X., Luxenhofer, R., Jordan, R., Kabanov, A.V. (2011) Neuronal uptake and intracellular superoxide scavenging of a new fullerene (C60)-poly(2-oxazoline)s nanoformulation, *Biomaterials* 32(14):3654-65. PMID: PMC3085347
127. Zhao, Y., Haney, M.J., Klyachko, N.L., Li, S., Booth, S.L., Higginbotham, S.M., Jones, J., Zimmerman, M.C., Mosley, R.L., Kabanov, A.V., Gendelman, H.E., Batrakova, E.V. (2011) Polyelectrolyte complex optimization for macrophage delivery of redox enzyme nanoparticles, *Nanomedicine (Lond)* 6(1):25-42. PMID: PMC3037278
128. Alakhova, D.Y., Rapoport, N.Y., Batrakova, E.V., Timoshin, A.A., Li, S., Nicholls, D., Alakhov, V.Y., Kabanov, A.V. (2010) Differential metabolic responses to pluronic in MDR and non-MDR cells: A novel pathway for chemosensitization of drug resistant cancers. *J. Control. Release* 142(1):89-100 PMID: PMC3113470
129. Batrakova, E.V., Li, S., Brynskikh, A.M., Sharma, A.K., Li, Y., Boska, M., Gong, N., Mosley, R.L., Alakhov, V.Y., Gendelman, H.E., Kabanov, A.V. (2010) Effects of pluronic and doxorubicin on drug uptake, cellular

metabolism, apoptosis and tumor inhibition in animal models of MDR cancers, *J. Control. Release*. 143(3):290-301. PMID: PMC3089980

130. Brynskikh, A.M., Li, S., Zhao, Y., Mosley, R.L., Boska, M.D., Klyachko, N.L., Kabanov, A.V., Gendelman, H.E., Batrakova, E.V. (2010) Macrophage delivery of therapeutic nanozymes in a murine model of Parkinson's disease, *Nanomedicine (Lond)*. 5(3):379-96. PMID: PMC2880389

131. Gaydess, A., Duysen, E., Li, Y., Gilman, V., Kabanov, A., Lockridge, O., Bronich, T. (2010) Visualization of exogenous delivery of nanoformulated butyrylcholinesterase to the central nervous system, *Chem. Biol. Interact*. 187(1-3):295-8. Epub 2010 Jan 11. PMID: PMC2998607

132. Kim, J.O., Sahay, G., Kabanov, A.V., Bronich, T.K. (2010) Polymeric micelles with ionic cores containing biodegradable cross-links for delivery of chemotherapeutic agents. *Biomacromolecules*, 11(4):919-26. PMID: PMC2854228

133. Kulebyakina A.I., Lysenko E.A., Chelushkin P.S., Kabanov A.V., Zezin A.B. (2010) Self-assembly of an amphiphilic diblock copolymer in aqueous solutions: Effect of linear charge density of an ionogenic block. *Polymer Science. Series A*. 52 (6): 574-585. English, Russian (Кулебякина А.И., Лысенко Е.А., Челушкин П.С., Кабанов А.В., Зезин А.Б. Влияние линейной плотности заряда ионогенного блока на самоорганизацию амфифильного диблок-сополимера в водных средах. Высокомолекулярные соединения. 2010. Т. 52. № 6. С. 908-920.)

134. Nowacek, A.S., Balkundi, S., McMillan, J., Roy, U., Martinez-Skinner, A., Mosley, R.L., Kanmogne, G., Kabanov, A.V., Bronich, T., Gendelman, H.E. (2010) Analyses of nanoformulated antiretroviral drug charge, size, shape and content for uptake, drug release and antiviral activities in human monocyte-derived macrophages. *J. Control Release* 150(2):204-11. PMID: PMC3065529

135. Luxenhofer, R., Schulz, A., Roques, C., Li, S., Bronich, T.K., Batrakova, E.V., Jordan, R., Kabanov, A.V. (2010) Doubly amphiphilic poly(2-oxazoline)s as high-capacity delivery systems for hydrophobic drugs. *Biomaterials*, 31(18):4972-9. PMID: PMC2884201

136. Price, T.O., Farr, S.A., Yi, X., Vinogradov, S., Batrakova, E.V., Banks, W.A., Kabanov, A.V. (2010) Transport across the blood-brain barrier of pluronic leptin. *J. Pharmacol. Exp. Ther.* 333(1):253-63 PMID: PMC2846026

137. Rosenbaugh, E., Roat, J., Gao, L., Yang, R.-F., Manickam, D.S., Yin, J.-X., Schultz, H.D., Bronich, T.K., Batrakova, E.V., Kabanov, A.V., Zucker, I.H., Zimmerman, M.C. (2010) The attenuation of central angiotensin II-dependent pressor response and intra-neuronal signaling by intracarotid injection of nanoformulated copper/zinc superoxide dismutase, *Biomaterials* 31(19):5218-26. PMID: PMC2860066

138. Sahay, G., Kim, J.O., Kabanov, A.V., Bronich T.K. (2010) The exploitation of differential endocytic pathways in normal and tumor cells in the selective targeting of nanoparticulate chemotherapeutic agents. *Biomaterials* 31(5), 923-33. PMID: PMC3082844

139. Sahay, G., Gautam, V., Luxenhofer, R., Kabanov, A.V. (2010) The utilization of pathogen-like cellular trafficking by single chain block copolymer. *Biomaterials* 31(7):1757-64. Epub 2009 Dec 5. PMID: PMC3070746

140. Tong, J., Luxenhofer, R., Yi, X., Jordan, R., Kabanov, AV. (2010) Protein modification with amphiphilic block copoly(2-oxazoline)s as a new platform for enhanced cellular delivery. *Mol Pharm.* 7(4):984-92. PMID: PMC3070747

141. Yi, X., Zimmerman, M.C., Yang, R., Vinogradov, S., Kabanov, A.V. (2010) Pluronic-modified superoxide dismutase 1 (SOD1) attenuates angiotensin II-induced increase in intracellular superoxide in neurons, *Free Radic. Biol. Med.* 49(4):548-58. PMID: PMC2998907

142. Uglanova S.V., Popov M.V., Kurova V.S., Batrakova E.V., Manickam D., Kabanov A.V., Klyachko N.L. (2010) Stabilization of enzymes-antioxidants by complex and conjugate formation with block copolymers: Prospects for CNS treatment. *Moscow University Chemistry Bulletin (in Russian)* 65: 190-6 (Углонова С.В., Попов М.В., Курова В.С., Батракова Е.В., Манихам Д., Кабанов А.В., Клячко Н.Л. Стабилизация ферментов-антиоксидантов в комплексах и конъюгатах с блоксополимерами: перспективы лечения

заболеваний центральной нервной системы. Вестник Московского университета. Серия 2: Химия, Химия 2010, том 51, № 3, стр. 227-234).

143. Abakumov M. A., Goldt A. E., Sokolsky-Papkov M., Zorkina, Y.A., Baklaushev, V.P., Goodilin, E.A., Kabanov, A.V., Chekhonin, V.P. (2011) Magnetic resonance imaging of endothelial cells with vectorized iron oxide nanoparticles, *Bull. Exp. Biol. Medicine* 151 (6): 726-730 English, Russian. (Абакумов М.А., Гольдт А.Е., Сокольски-Папков М., Зоркина Я.А., Баклаушев В.П., Гудилин Е.А., Кабанов А.В., Чехонин В.П. Векторизованные наночастицы оксида железа для визуализации эндотелиоцитов методом магнитно-резонансной томографии. Бюллетень экспериментальной биологии и медицины. 2011, 151(6), 672- 676.) PMID: 22485218

144. Barz, M., Luxenhofer, R., Zentel, R., Kabanov, A.V. (2009) The uptake of N-(2-hydroxypropyl)-methacrylamide based homo, random and block copolymers by human multi-drug resistant breast adenocarcinoma cells. *Biomaterials*, 30(29):5682-90. PMID: PMC3089424

145. Beduneau, A., Ma, Z., Grotepas, C.B., Kabanov, A., Rabinow, B.E., Gong, N., Mosley, R.L., Dou, H., Boska, M.D., Gendelman, H.E. (2009) Facilitated monocyte-macrophage uptake and tissue distribution of superparamagnetic iron-oxide nanoparticles. *PLoS ONE*, 4(2): e4343. PMID: PMC2629545

146. Gaymalov, Z.Z., Yang, Z, Pisarev, V.M., Alakhov, V.Yu., Kabanov, A.V. (2009) The effect of the nonionic block copolymer pluronic P85 on gene expression in mouse muscle and antigen-presenting cells, *Biomaterials*, 30 (6): 1232-45. PMID: PMC2667955

147. Kim, J.O., Kabanov, A.V., Bronich, T.K. (2009) Polymer micelles with cross-linked polyanion core for delivery of a cationic drug doxorubicin. *J. Control. Release* 138(3), 197-204. PMID: PMC2728168

148. Kim, J.O., Nukolova, N.V., Oberoi, H.S., Kabanov, A.V., Bronich, T.K. (2009) Block ionomer complex micelles with cross-linked cores for drug delivery. *Polymer Science, Ser. A* 51(6), 708-718. PMID: PMC2994363

149. Lysenko, E.A., Trusov, A.N., Chelushkin, P.S., Bronich, T.K., Kabanov, A.V., Zezin, A.B. (2009) Mixed micelles based of cationic and anionic amphiphilic diblock copolymers containing identical hydrophobic blocks. *Polymer Science, Ser. A*, 51 (6), 606-615. (Е.А. Лысенко, А.Н. Трусов, П.С. Челушкин, Т.К. Бронич, А.В. Кабанов, А.Б. Зезин, Смешанные мицеллы на основе катионного и анионного амфифильных диблок-сополимеров с идентичным гидрофобным блоком, *Высокомолекулярное Соединение*. 2009, Т. 51 (А), № 6, 929 – 939).

150. Oishi, M., Sumitani, S., Bronich, T.K., Kabanov, A.V., Boska, M.D., Nagasaki, Y. (2009) Novel ¹⁹FMRSA/I nanoprobe based on pH-responsive PEGylated nanogel: pH-dependent ¹⁹F magnetic resonance studies. *Chemistry Letters*, 38(2):128-29.

151. Wang, Y., Han, P., Xu, H., Wang, Z., Zhang, X., Kabanov, A.V. (2009) Photocontrolled self-assembly and disassembly of block ionomer complex vesicles: A facile approach toward supramolecular polymer nanocontainers. *Langmuir* 26(2):709-15.

152. Zhang, X., Alakhova, D.Y., Batrakova, E.V., Li, S., Yang, Z., Li, Y., Kabanov, A.V. (2009) Effect of Pluronic P85 on amino acid transport in bovine brain microvessel endothelial cells. *J. Neuroimmune Pharmacol.* 4(1):35-46. PMID: PMC2644348

153. Chelushkin, P.S., Lysenko, E.A., Bronich, T.K., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (2008) Polyion complex nanomaterials from block polyelectrolyte micelles and linear polyelectrolytes of opposite charge: 2. Dynamic properties, *J. Phys. Chem. B.*, 112(26):7732-8. PMID: 18533694

154. Li, Y., Bronich, T.K., Chelushkin, P.S., Kabanov, A.V. (2008) Dynamic properties of block ionomer complexes with polyion complex cores, *Macromolecules* 41(15):5863-5868. DOI: [10.1021/ma702671w](https://doi.org/10.1021/ma702671w)

155. Sahay, G, Batrakova, E.V., Kabanov, A.V. (2008) Different internalization pathways of polymeric micelles and unimers and their effects on vesicular transport. *Bioconjug. Chem.*, 19(10):2023-9. PMID: PMC2575076

156. Sharma, A.K., Zhang, Li., Li, S., Kelly, D.L., Alakhov, V.Yu., Batrakova, E.B., Kabanov, A.V. (2008) Prevention of MDR development in leukemia cells by micelle-forming polymeric surfactant. *J. Control. Release*, 131(3):220-7. PMID: PMC2711209

157. Wang, F., Bronich, T.K., Kabanov, A.V., Rauh, R.D., Roovers, J. (2008) Synthesis and characterization of star poly(epsilon-caprolactone)-b-poly(ethylene glycol) and poly(L-lactide)-b-poly(ethylene glycol) copolymers: evaluation as drug delivery carriers. *Bioconjug. Chem.* 19(7):1423-9. PMID: PMC2711207
158. Yang, Z., Sahay, G., Sriadibhatla, S., Kabanov, A.V. (2008) Amphiphilic block copolymers enhance cellular uptake and nuclear entry of polyplex-delivered DNA. *Bioconjug. Chem.*, 19(10):1987-94. PMID: PMC2574534
159. Yi, X., Batrakova, E.V., Banks, W.A. Vinogradov, S.V., Kabanov, A.V. (2008) Protein conjugation with amphiphilic block copolymers for enhanced cellular delivery, *Bioconjug. Chem.*, 19(5):1071-7. PMID: PMC2570949
160. Batrakova, E.V., Shu, L., Reynolds, A., Mosley, R.L., Bronich, T.K., Kabanov, A.V., Gendelman, H.E. (2007) A macrophage-nanozyme delivery system for Parkinson's disease, *Bioconjug. Chem.* 18(5):1498-1506. PMID: PMC2677172
161. Chelushkin, P.S., Lysenko, E.A., Bronich, T.K., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (2007) Polyion complex nanomaterials from block polyelectrolyte micelles and linear polyelectrolytes of opposite charge: 1. Solution Behavior. *J. Phys. Chem. B.* 111(29):8419-25. PMID: 17441751
162. Oh, K.T., Bronich, T.K., Kabanov, V.A., Kabanov, A.V. (2007) Block polyelectrolyte networks from poly(acrylic acid) and poly(ethylene oxide): sorption and release of cytochrome C. *Biomacromolecules* 8(2):490-7. PMID: 17291073
163. Solomatin, S.V., Bronich, T.K., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (2007) Nanomaterials from ionic block copolymers and single-, double- and triple-tail surfactants, *J. Phys. Chem. B.* 23(5):2838-42. PMID: 17266337
164. Spitzenberger, T.J., Heilman, D., Diekmann, C., Batrakova, E.V., Kabanov, A.V., Gendelman, H.E., Elmquist, W.F., Persidsky Y. (2007) Novel delivery system enhances efficacy of antiretroviral therapy in animal model for HIV-1 encephalitis. *J. Cereb. Blood Flow Metab.* 27(5):1033-42. PMID: PMC3070745
165. Batrakova, E.V., Kelly, D.L., Li, S., Li, Y., Yang, Z., Xiao, L., Alakhova, D.Y., Sherman, S., Alakhov, V.Y., Kabanov, A.V. (2006) Alteration of genomic responses to doxorubicin and prevention of MDR in breast cancer cells by a polymer excipient: pluronic P85. *Mol. Pharm.* 3(2):113-23. PMID: PMC2566789
166. Bontha, S., Kabanov, A.V., Bronich, T.K. (2006) Polymer micelles with cross-linked ionic cores for delivery of anticancer drugs. *J. Control. Release* 114(2):163-74.
167. Bronich, T.K., Bontha, S.A., Shlyakhtenko, L.S., Bromberg, L., Hatton, T.A., Kabanov, A.V. (2006) Template-assisted synthesis of nanogels from Pluronic-modified poly(acrylic acid), *J. Drug Target.* 14(6):357-66. PMID: 16919349
168. Litmanovich, E.A., Syaduk, G.V., Lysenko, E.A., Zezin, A.B., Kabanov, A.V., Kabanov, V.A. (2006) Effect of concentration regime on rheological properties of sodium polymethacrylate and its complexes with polystyrene-poly(N-ethyl-4-vinylpyridinium bromide) block copolymer in aqueous salt solution. *Polymer Science, Ser. A* 48 (9):997-1003.
169. Oh, K.T., Bronich, T.K., Bromberg, L., Hatton, T.A., Kabanov, A.V. (2006) Block ionomer complexes as prospective nanocontainers for drug delivery, *J. Control. Release* 115 (1):9-17. PMID: 16919349
170. Sriadibhatla, S., Yang, Z., Gebhart, C., Alakhov, V.Y., Kabanov, A. (2006) Transcriptional activation of gene expression by pluronic block copolymers in stably and transiently transfected cells. *Mol. Ther.* 13(4):804-13. PMID: 16199206.
171. Batrakova, E.V., Vinogradov, S.V., Robinson, S.M., Niehoff, M.L., Banks, W.A., Kabanov, A.V. (2005) Polypeptide point modifications with fatty acid and amphiphilic block copolymers for enhanced brain delivery. *Bioconjug. Chem.* 16(4):793-802. Erratum in: *Bioconjug. Chem.* 16(5):1334. PMID: PMC2711208.
172. Bronich, T.K., Keifer, P.A., Shlyakhtenko, L.S., Kabanov, A.V. (2005) Polymer micelle with cross-linked ionic core. *J. Am. Chem. Soc.* 127(23):8236-7.

173. Minko, T., Batrakova, E.V., Li, S., Li, Y., Pakunlu, R.I., Alakhov, V.Y., Kabanov, A.V. (2005) Pluronic block copolymers alter apoptotic signal transduction of doxorubicin in drug-resistant cancer cells, *J. Control. Release* 105(3):269-78. PMID: PMC2711210
174. Solomatin, S.V., Bronich, T.K., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (2005) Fluorescence anisotropy study of aqueous dispersions of block ionomer complexes, *J. Phys. Chem. B.* 109(10):4303-8.
175. Vinogradov, S.V., Zeman, A.D., Batrakova, E.V., Kabanov, A.V. (2005) Polyplex Nanogel formulations for drug delivery of cytotoxic nucleoside analogs. *J. Control. Release* 107(1):143-57. PMID: PMC1357595.
176. Wang, F., Bronich, T.K., Kabanov, A.V., Rauh, R.D. (2005) Synthesis and evaluation of a star amphiphilic block copolymer from poly(ϵ -caprolactone) and poly(ethylene glycol) as potential drug delivery carrier, *Bioconjug. Chem.* 16(2):397-405.
177. Yang, Z., Zhu, J., Sriadibhatla, S., Gebhart, C., Alakhov, V., Kabanov, A. (2005) Promoter- and strain-selective enhancement of gene expression in a mouse skeletal muscle by a polymer excipient Pluronic P85, *J. Control. Release* 108(2-3):496-512. PMID: 16154658.
178. Alakhov, V., Pietrzynski, G., Patel, K., Kabanov, A., Bromberg, L., Hatton T.A. (2004) Pluronic block copolymers and Pluronic poly(acrylic acid) microgels in oral delivery of megestrol acetate. *J. Pharm. Pharmacol.* 56(10):1233-1234.
179. Batrakova, E.V., Li, S., Li, Y., Alakhov, V.Y., Elmquist, W.F., Kabanov, A.V. (2004) Distribution kinetics of a micelle-forming block copolymer pluronic P85. *J. Control. Release* 100 (3), 389-397
180. Batrakova, E.V., Zhang, Y., Li, Y., Li, S., Vinogradov, S.V., Persidsky, Y., Alakhov, V., Miller, D.W., Kabanov, A.V. (2004) Effects of Pluronic P85 on GLUT1 and MCT1 transporters in the blood brain barrier, *Pharm. Res.* 21 (11), 1993-2000.
181. Batrakova, E.V., Li, S., Li, Y., Alakhov, V.Y., Kabanov, A.V. (2004) Effect of pluronic P85 on ATPase activity of drug efflux transporters, *Pharm. Res.* 21(12), 2226-2233. PMID: PMC2677181
182. Belenkov, A.I., Alakhov, V.Y., Kabanov, A.V., Vinogradov, S.V., Panasci, L.C., Monia, B.P., Chow T.Y.K. (2004) Polyethyleneimine grafted with Pluronic P85 enhances Ku86 antisense delivery and the ionizing radiation treatment efficacy in vivo, *Gene Ther.* 11(22), 1665-1672.
183. Chelushkin, P.S., Lysenko, E.A., Bronich, T.K., Eisenberg, A., Kabanov, A.V., Kabanov, V.A. (2004) Interpolyelectrolyte complexes with a micellar structure, *Doklady Physical Chemistry*, 395 (1), 72-75. (Translated from: П.С. Челушкин, Е.А. Лысенко Т.К. Бронич, А. Эйзенберг, А.В. Кабанов, В.А. Кабанов, «Интерполиэлектrolитные комплексы с мицеллярной структурой», // Доклады Академии Наук, 2004, Т. 395, № 1, 74-77).
184. Chelushkin, P.S., Lysenko, E.A., Bronich, T.K., Eisenberg, A., Kabanov, A.V., Kabanov, V.A. (2004) Interpolyelectrolyte complexes of a cationic amphiphilic diblock copolymer and an oppositely charged linear polyanion, *Polymer Science, Ser. A*, 46 (5), 485-490 (П.С. Челушкин, Е.А. Лысенко Т.К. Бронич, А. Eisenberg, А.В. Кабанов, В.А. Кабанов, Интерполиэлектrolитные комплексы катионного амфифильного диблок-сополимера и противоположно заряженного линейного полианиона, *Высокомогл. Соед.* 2004, Т. 46 (А), № 5 799 – 806).
185. Lysenko, E.A., Chelushkin, P.S., Bronich, T.K., Eisenberg, A., Kabanov, V. A., Kabanov, A.V. (2004) Formation of multilayer polyelectrolyte complexes by using block ionomer micelles as nucleating particles, *J. Phys. Chem. B.* 108(33), 12352-12359.
186. Oh, K.T., Bronich, T.K., Kabanov, A.V. (2004) Micellar formulations for drug delivery based on mixtures of hydrophobic and hydrophilic Pluronic® block copolymers, *J. Control. Release* 94(2-3), 411-422
187. Solomatin, S.V., Bronich, T.K., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (2004) Colloidal stability of aqueous dispersions of block ionomer complexes: effects of temperature and salt, *Langmuir* 20(6), 2066 - 2068
188. Vinogradov, S.V., Batrakova, E.V., Kabanov, A.V. (2004) Nanogels for oligonucleotide delivery to the brain. *Bioconjug. Chem.* 15(1), 50-60 PMID: PMC2837941

189. Vinogradov, S.V. Batrakova, E.V., Li, S., Kabanov, A.V. (2004) Mixed polymer micelles of amphiphilic and cationic copolymers for delivery of antisense oligonucleotide, *J. Drug Target.* 12 (8), 517-526
190. Batrakova, E.V., Li, S., Alakhov, V.Y., Miller, D.W., Kabanov, A.V. (2003) Optimal structure requirements for pluronic block copolymers in modifying P-glycoprotein drug efflux transporter activity in bovine brain microvessel endothelial cells, *J. Pharmacol. Exp. Ther.* 304 (2), 845-854. PMID: 12538842.
191. Batrakova, E.V., Li, S., Alakhov, V.Y., Elmquist, W.F., Miller, D.W., Kabanov, A.V. (2003) Sensitization of cells overexpressing multidrug resistant protein by Pluronic P85, *Pharm. Res.* 10, 1581-1590
192. Kabanov, A.V., Batrakova, E.V., Alakhov, V.Y. (2003) An essential relationship between ATP depletion and chemosensitizing activity of Pluronic® block copolymers, *J. Control. Release* 91(1-2), 75-83
193. Solomatin, S.V., Bronich, T.K., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (2003) Environmentally responsive nanoparticles from block ionomer complexes: effects of pH and ionic strength, *Langmuir* 19, 8069-8076
194. Bronich, T.K., Ouyang, M., Kabanov, V.A., Eisenberg, A., Szoka Jr., F.C., Kabanov, A.V. (2002) Synthesis of vesicles on polymer template, *J. Am. Chem. Soc.* 124(40), 11872-11873.
195. Gebhart, C.L., Sriadibhatla, S., Vinogradov, S., Lemieux, P., Alakhov, V., Kabanov, A.V. (2002) Design and formulation of polyplexes based on Pluronic®-polyethyleneimine conjugates for gene transfer, *Bioconjug. Chem.* 13 (5), 937-944.
196. Lysenko E.A., Bronich, T.K., Slonkina, E.V., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (2002) Block ionomer complexes with polystyrene core-forming block in selective solvents of various polarities: 1. Solution behavior and self-assembly in aqueous media, *Macromolecules* 35 (16), 6351-6361.
197. Lysenko E.A., Bronich, T.K., Slonkina, E.V., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (2002) Block ionomer complexes with polystyrene core-forming block in selective solvents of various polarities: 2. Solution behavior and self-assembly in nonpolar solvents, *Macromolecules* 35 (16), 6344-6350.
198. Ochietti, B., Guérin, N., Vinogradov, S.V., St-Pierre, Y., Lemieux, P., Kabanov, A.V., Alakhov, V.Y. (2002) Altered organ accumulation of oligonucleotides using polyethyleneimine grafted with poly(ethylene oxide) or Pluronic as carriers, *J. Drug Targeting* 10(2), 113-121
199. Ochietti, B., Lemieux, P., Kabanov, A.V., Vinogradov, S.V., St-Pierre, Y., Alakhov, V. (2002) Inducing neutrophil recruitment in the liver of ICAM-1-deficient mice using polyethyleneimine grafted with Pluronic P123 as an organ specific carrier for transgenic ICAM-1. *Gene Ther.* 9 (14), 939-945.
200. Batrakova, E.V., Li, S., Elmquist, W.F., Miller, D.W., Alakhov, V.Y., Kabanov, A.V. (2001) Mechanism of sensitization of MDR cancer cells by Pluronic block copolymers: selective energy depletion, *Br. J. Cancer* 85 (12), 1987-1997. PMCID: PMC2364003
201. Batrakova, E.V., Miller, D.W., Li, S., Alakhov, V.Y., Kabanov, A.V., Elmquist, W.F. (2001) Pluronic P85 enhances the delivery of digoxin to the brain: in vitro and in vivo studies, *J. Pharmacol. Exp. Ther.* 296 (2), 551-557. PMID: 11160643
202. Batrakova, E.V., Li, S., Vinogradov, S.V., Alakhov, V.Y., Miller, D.W., Kabanov, A.V. (2001) Mechanism of pluronic effect on p-glycoprotein efflux system in blood brain barrier: contributions of energy depletion and membrane fluidization, *J. Pharmacol. Exp. Ther.* 299 (2), 483-493. PMID: 11602658
203. Bronich, T., Kabanov, A.V., Marky, L.A. (2001) A thermodynamic characterization of the interaction of a cationic copolymer with DNA, *J. Phys. Chem. B* 105, 6042-6050
204. Bronich, T.K., Vinogradov, S.V., Kabanov, A.V. (2001) Interaction of nanosized copolymer networks with oppositely charged amphiphilic molecules, *NANO Lett.* 1 (10), 535-540
205. Gebhart, C.L., Kabanov, A.V. (2001) Evaluation of polyplexes as gene transfer agents, *J. Control. Release* 73 (2-3) 401-416

206. Bronich, T.K., Popov, A.M., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (2000) Effects of block length and structure of surfactant on self-assembly and solution behavior of block ionomer complexes. *Langmuir* 16, 481-489
207. Bronich, T.K., Solomatin, S., Yaroslavov, A., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (2000) Steric stabilization of negatively charged liposomes by cationic graft copolymer, *Langmuir* 16, 4877-4881
208. Bronich, T.K., Nguyen, H.-K., Eisenberg, A., Kabanov, A.V. (2000) Recognition of DNA topology in reactions between plasmid DNA and cationic copolymers, *J. Am. Chem. Soc.* 122 (35), 8339-8343
209. Kozlov, M.Y., Melik-Nubarov, N.S., Batrakova, E.V., Kabanov, A.V. (2000) Relationship between Pluronic® block copolymer structure, critical micellization concentration and partitioning coefficients of low molecular mass solutes, *Macromolecules* 33, 3305-3313
210. Lemieux, P., Guérin, N., Paradis, G., Proulx, R., Tchistiakova, L., Kabanov, A., Alakhov, V. (2000) A combination of poloxamers increases gene expression of plasmid DNA in skeletal muscle. *Gene Ther.* 7(11), 986-991
211. Lemieux, P., Vinogradov, S.V., Gebhart, C.L., Guérin, N., Paradis, G., Nguyen, H.-K., Ochiatti, B., Suzdaltseva, Y.G., Bartakova, E.V., Bronich, T.K., St-Pierre, Y., Alakhov, V.Y., Kabanov, A.V. (2000) Block and graft copolymers and Nanogel™ copolymer networks for DNA delivery into cell. *J. Drug Targ.* 8(2), 91-105
212. Nguyen, H.-K., Lemieux, P., Vinogradov, S., Gebhart, C.L., Guérin, N., Paradis, G., Bronich, T., Alakhov, V.Y., Kabanov, A.V. (2000) Evaluation of polyether-polyethyleneimine graft copolymers as gene transfer agents. *Gene Ther.* 7, 126-138
213. Alakhov, V., Klinsky, E., Li, S., Pietrzynski, G., Venne, A., Batrakova, E., Bronich, T., Kabanov, A. (1999) Block copolymer-based formulation of doxorubicin. From cell screen to clinical trials. *Coll. Surf. B: Biointerfaces* 16, 113-134
214. Batrakova, E.V., Li, S., Miller, D.W., Kabanov, A.V. (1999) Pluronic P85 increases permeability of broad spectrum of drugs in polarized BBMEC and Caco-2 cell monolayers. *Pharm. Res.* 16 (9), 1366-1372. PMID: 10496651
215. Batrakova, E., Lee, S., Li, S., Venne, A., Alakhov, V., Kabanov, A. (1999) Fundamental relationships between the composition of Pluronic block copolymers and their hypersensitization effect in MDR cancer cells. *Pharm. Res.* 16 (9), 1373-1379. PMID: 10496652
216. Bronich, T.K., Nehls, A., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (1999) Novel drug delivery systems based on the complexes of block ionomers and surfactants of opposite charge. *Coll. Surf. B: Biointerfaces* 16, 243-252.
217. Melik-Nubarov, N.S., Dorodnykh, T.Y., Batrakova, E.V., Kozlov, M.Y., Suzdaltseva, Y.G., Kabanov, A.V., Alakhov, V.Y., Arzhakov, S.A. (1999) Synthesis and biological activity of the functional block-copolymers based on Pluronic P85-doxorubicin conjugates. *Vysokomol. Soed., Ser. A (Russian)* 41, 768-775.
218. Miller, D.W., Batrakova, E.V., Kabanov, A.V. (1999) Inhibition of multidrug resistance-associated protein (MRP) functional activity with pluronic block copolymers. *Pharm. Res.* 16 (3), 396-401. PMID: 10213370
219. Roy, S., Zhang, K., Roth, T., Vinogradov, S., Kao, R.S., Kabanov, A. (1999) Reduction of fibronectin expression by intravitreal administration of antisense oligonucleotides. *Nature Biotechnology* 17 (5), 476-479.
220. Vinogradov, S., Batrakova, E., Li, S., Kabanov, A. (1999) Polyion complex micelles with protein-modified corona for receptor-mediated delivery of oligonucleotides into cells. *Bioconjug. Chem.* 10 (5), 851-860.
221. Vinogradov, S., Batrakova, E., Kabanov, A. (1999) Poly(ethylene glycol)-polyethyleneimine NanoGel™ particles: novel drug delivery systems for antisense oligonucleotides. *Coll. Surf. B: Biointerfaces* 16, 291-304
222. Batrakova EV, Han, H-Y, Alakhov, VY, Miller, DW, Kabanov, AV (1998) Effects of pluronic block copolymers on drug absorption in Caco-2 cell monolayers. *Pharm. Res.* 15, 850-855. PMID: 9647349

223. Batrakova, E.V., Han, H-Y., Miller, D.W., Kabanov, A.V. (1998) Effects of pluronic P85 unimers and micelles on drug permeability in polarized BBMEC and Caco-2 cells. *Pharm. Res.* 15 (10), 1525-1532. PMID: 9794493
224. Bronich, T.K., Cherry, T., Vinogradov, S.V., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (1998) Self-assembly in mixtures of poly(ethylene oxide)-block-polyethyleneimine and alkyl sulfate anions. *Langmuir* 14, 6101-6106
225. Kabanov, A.V., Bronich, T.K., Kabanov, V.A., Yu, K., Eisenberg, A. (1998) Spontaneous formation of vesicles from complexes of block ionomers and surfactants. *J. Am. Chem. Soc.* 120, 9941-9942
226. Lysenko, E.A., Bronich, T.K., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (1998) Block ionomer complexes from polystyrene-block-polyacrylate anionis and N-cetylpyridinium cations. *Macromolecules* 31, 4511-4515.
227. Lysenko, E.A., Bronich, T.K., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (1998) Solution behavior and self-assembly of complexes from poly(α -methylstyrene)-block-poly(N-ethyl-4-vinylpyridinium) cations and aerosol OT anions. *Macromolecules* 31, 4516-4519.
228. Mundigl, O., Ochoa, G-C., Slepnev, V.I., Kabanov, A., De Camilli, P. (1998) Amphiphysin I antisense oligonucleotides inhibit neurite outgrowth in cultured hippocampal neurons. *J. Neurosci.* 18 (1), 93-103
229. Vinogradov, S.V., Bronich, T.K., Kabanov, A.V. (1998) Self-assembly of polyamine-poly(ethylene glycol) copolymers with phosphorothioate oligonucleotides. *Bioconjug. Chem.* 9 (6), 805-812.
230. Bronich, T.K., Kabanov, A.V., Kabanov, V.A., Yu, K., Eisenberg, A. (1997) Soluble complexes from poly(ethylene oxide)-block-polymethacrylate anions and N-alkylpyridinium cations. *Macromolecules* 30, 3519-3525
231. Miller, D.W., Batrakova, E.V., Waltner, T.O., Alakhov, V.Y., Kabanov, A.V. (1997) Interactions of pluronic block copolymers with brain microvessel endothelial cells: evidence of two potential pathways for drug absorption. *Bioconjug. Chem.* 8 (5), 649-657. PMID: 9327127
232. Alakhov, V.Y., Moskaleva, E.Y., Batrakova, E.V., Kabanov, A.V. (1996) Hypersensitization of multidrug resistant human ovarian carcinoma cells by Pluronic P85 block copolymer. *Bioconjug. Chem.* 7 (2), 209-216. PMID: 8983343
233. Anufrieva, A.V., Nekrasova TN, Kabanov, A.V., Levashov, A.V. (1996) Nanosecond relaxation processes and Brownian motion of water-soluble polymers in micellar systems of surface-active compounds in organic solvents. *Vysokomol. Soed., Ser. A (Russian)* 38, 891-895.
234. Astafieva, I., Maksimova, I., Lukanidin, E., Alakhov, V., Kabanov, A. (1996) Enhancement of the polycation-mediated DNA uptake and cell transfection with Pluronic P85 block copolymer, *FEBS Lett.* 389 (3), 278-280
235. Batrakova, E.V., Dorodnych, T.Y., Klinskii, E.Y., Kliushnenkova, E.N., Shemchukova, O.B., Arjakov, S.A., Alakhov, V.Y., Kabanov, A.V. (1996) Anthracycline antibiotics non-covalently incorporated into the block copolymer micelles: in vivo evaluation of anti-cancer activity, *Br. J. Cancer* 74 (10), 1545-1552. PMID: PMC2074856
236. Kabanov, A.V., Bronich, T.K., Kabanov, V.A., Yu, K., Eisenberg, A. (1996) Soluble stoichiometric complexes from poly(N-ethyl-4-vinylpyridinium) cations and poly(ethylene oxide)-block-poly(methacrylate) anions. *Macromolecules* 29, 6797-6802
237. Venne, A., Li, S., Mandeville, R., Kabanov, A.V., Alakhov, V.Y. (1996) Hypersensitizing effect of pluronic L61 on cytotoxic activity, transport, and subcellular distribution of doxorubicin in multiple drug-resistant cells, *Cancer Res.* 56 (16), 3626-3629
238. Vinogradov, S.V., Suzdaltseva, Y.G., Kabanov, A.V. (1996) Block polycationic oligonucleotide derivative: synthesis and inhibition of herpes virus reproduction. *Bioconjug. Chem.* 7 (1), 3-6.

239. Yaroslavov, A.A., Sukhishvili, S.A., Obolsky, O.L., Yaroslavova, E.G., Kabanov, A.V., Kabanov, V.A. (1996) DNA affinity to biological membrane is enhanced due to complexation with hydrophobic polycation. *FEBS Lett.* 384 (2), 177-180.
240. Kabanov AV, Nazarova IR, Astafieva IV, Batrakova EV, Alakhov VY, Yaroslavov AA, Kabanov VA (1995) Micelle formation and solubilization of fluorescent probes in poly(oxyethylene-b-oxypropylene-b-oxyethylene) solutions. *Macromolecules* 28, 2303-2314.
241. Kabanov, A.V., Sergeev, V.G., Foster, M.S., Kasaikin, A.V., Levashov, A.V., Kabanov, V.A. (1995) Polyelectrolytes and oppositely charged surfactants in organic solvents: from reversed micelles to soluble polymer-surfactant complexes. *Macromolecules* 28, 3657-3663.
242. Kabanov, A.V., Vinogradov, S.V., Suzdaltseva YG., Alakhov, V.Y. (1995) Water-soluble block polycations for oligonucleotide delivery. *Bioconjug. Chem.* 6 (6), 639-643. PMID: 8608176.
243. Slepnev, V.I., Phalente, L., Labrousse, H., Melik-Nubarov, N.S., Mayau, V., Goud, B., Buttin, G., Kabanov, A.V. (1995) Fatty acid acylated peroxidase as a model for the study of interactions of hydrophobically-modified proteins with mammalian cells. *Bioconjug. Chem.* 6 (5), 608-615.
244. Kabanov, A.V., Astafieva, I.V., Maksimova, I.V., Lukanidin, E.M., Georgiev, G.P., Kabanov, V.A. (1993) Efficient transformation of mammalian cells using DNA interpolyelectrolyte complexes with carbon chain polycations. *Bioconjug. Chem.* 4 (6), 448-454.
245. Melik-Nubarov, N.S., Suzdaltseva, Y.G., Priss, E.L., Slepnev, V.I., Kabanov, A.V., Zhirnov, O.P., Sveshnikov, P.G., Severin E.S. (1993) Interaction of hydrophobized antiviral antibodies with influenza virus infected MDCK cells. *Biochem. Mol. Biol. Int.* 29 (5), 939-947.
246. Nametkin, S.N., Kabanov, A.V., Levashov, A.V. (1993) Alkaline phosphatase from calf intestinal mucosa in reversed micelle system: modulation of enzyme membrane activity by pH variation. *Biochem. Mol. Biol. Int.* 29 (1), 103-111.
247. Sukhishvili, S.A., Obolskii, O.L., Astafieva, I.V., Kabanov, A.V., Yaroslavov, A.A. (1993) DNA containing interpolyelectrolyte complexes: interaction with liposomes. *Vysokomol. Soed. Ser. A. (Russian)* 35, 1895-1899 (English edition: *Polym. Sci., Ser. A*, 35, 1602-1606 (1993)).
248. Kabanov, A.V., Alakhov, V.Y., Chekhonin, V.P. (1992) Enhancement of macromolecule penetration into cells and nontraditional drug delivery systems. *Sov. Sci. Rev., Ser. D Physicochem. Biol.*⁹ 11 (2), 1-77.
249. Kabanov, A.V., Batrakova, E.V., Melik-Nubarov, N.S., Fedoseev, N.A., Dorodnich, T.Y., Alakhov, V.Y., Chekhonin, V.P., Nazarova, I.R., Kabanov, V.A. (1992) A new class of drug carriers: micelles of poly(oxyethylene)-poly(oxypropylene) block copolymers as microcontainers for drug targeting from blood in brain. *J. Control. Release* 22, 141-158.
250. Kabanov, A.V., Slepnev, V.I., Kuznetsova, L.E., Batrakova, E.V., Alakhov, V.Y., Melik-Nubarov, N.S., Sveshnikov, P.G., Kabanov, V.A. (1992) Pluronic micelles as a tool for low-molecular compound vector delivery into a cell: effect of *Staphylococcus aureus* enterotoxin B on cell loading with micelle incorporated fluorescent dye. *Biochem. Int.* 26 (6), 1035-1042.
251. Nametkin, S.N., Dadajan, A.K., Kabanov, A.V., Levashov, A.V. (1992) Modulation of membrane activity of an enzyme in reversed micelle system with a change of media pH (using alkaline phosphatase as an example). *Bioorg. Khim. (Russian)* 18 (6), 777-783.
252. Nametkin, S.N., Kolosov, M.I., Ovodov, S.Y., Alexandrov, A.N., Levashov, A.V., Alakhov, V.Y., Kabanov, A.V. (1992) Cell-free translation in reversed micelles. *FEBS Lett.* 309 (3), 330-332.
253. Slepnev, V.I., Melik-Nubarov, N.S., Kabanov, A.V. (1992) Protein radiolabelling with Bolton-Hunter reagent in reversed micelles. *Bioconjug. Chem.* 3 (4), 273-274.
254. Slepnev, V.I., Kuznetsova, L.E., Gubin, A.N., Batrakova, E.V., Alakhov, V.Y., Kabanov, A.V. (1992) Micelles of poly(oxyethylene)-poly(oxypropylene) block copolymer (pluronic) as a tool for low-molecular

⁹ VP Skulachev, ed. Harwood Academic Publishers. Glasgow.

compound delivery into a cell. Phosphorylation of intracellular proteins with micelle incorporated [³²P]ATP. *Biochem. Internat.* 26 (4), 587-595.

255. Chekhonin, V.P., Kabanov, A.V., Zhirkov, Y.A., Morozov, G.V. (1991) Fatty acid acylated Fab-fragments of antibodies to neurospecific proteins as carriers for neuroleptic targeted delivery in brain. *FEBS Lett.* 287 (1-2), 149-152.

256. Kabanov, A.V., Astafieva, I.V., Chikindas, M.L., Rosenblat, G.F., Kiselev, V.I., Severin, E.S., Kabanov, V.A. (1991) DNA interpolyelectrolyte complexes as a tool for efficient cell transformation. *Biopolymers* 31 (12), 1437-1443

257. Kabanov, A.V., Nametkin, S.N., Klyachko, N.L., Levashov, A.V. (1991) Regulation of the catalytic activity and oligomeric composition of enzymes in the reversed micelles of surfactants in organic solvents. *FEBS Lett.* 278 (2), 143-146.

258. Kabanov, A.V., Klyachko, N.L., Nametkin, S.N., Merker, S., Zaroza, A., Bunik, V., Ivanov, M.V., Levashov, A.V. (1991) Engineering of functional supramolecular complexes of proteins (enzymes) using reversed micelles as matrix microreactors. *Protein Eng.* 4 (8), 1009-1017.

259. Kabanov, A.V., Nametkin, S.N., Chernov, N.N., Klyachko, N.L., Levashov, A.V. (1991) Subunit separation in reversed micelle system in combination with inhibitor analysis reveals the existence of active centers both on light and heavy γ -glutamyltransferase subunits. *FEBS Lett.* 295 (1-3), 73-76.

260. Kolomiets, A.G., Votyakov, V.I., Vladyko, G.V., Ovcharenko, A.V., Kabanov, A.V., Melik-Nubarov, N.S., Yaskovets NY, Malakhova I.V., Eremin, VF, Moroz AG, Kolomiets ND (1991) The antiviral activity and therapeutic efficacy of hydrophobized monoclonal antibodies against the herpes simplex virus. *Dokl. Acad. Nauk SSSR, Ser. Biokhimiya (Russian)* 317 (6), 1487-1490.

261. Nametkin, S.N., Kabanov, A.V., Evtushenko GN, Klyachko, N.L., Kolesanova EF, Rotanova TV, Chernov NN, Levashov, A.V. (1991) Comparative study of the regulation of catalytic activity of soluble and membrane forms of enzymes in reverse micellar systems. Gamma-glutamyltransferase and aminopeptidase. *Bioorg. Khim. (Russian)* 17 (4), 442-447.

262. Nametkin, S.N., Kabanov, A.V., Klyachko, N.L., Levashov, A.V. (1991) Alkaline phosphatase in reverse micelles of surfactants in organic solvent. *Bioorg. Khim. (Russian)* 17 (5), 606-609.

263. Nametkin, S.N., Kabanov, A.V., Klyachko, N.L., Levashov, A.V. (1991) Artificial oligomerization of enzymes - a new way of regulating their catalytic activity in reversed micellar systems. *Bioorg. Khim. (Russian)* 17 (6), 756-759.

264. Nametkin, S.N., Kabanov, A.V., Levashov, A.V. (1991) The study of active centers of gamma-glutamyltransferase in the aerosol OT reverse micellar system in octane by an inhibitor analysis method. *Bioorg. Khim. (Russian)* 17 (8), 1027-1032.

265. Severin E.S., Melik-Nubarov, N.S., Ovcharenko, A.V., Vinogradov, S.V., Kiselev VI, Kabanov, A.V. (1991) Hydrophobized antiviral antibodies and antisense oligonucleotides. *Adv. Enzyme Reg.*¹⁰ 31, 417-430.

266. Alakhov, V.Y., Arzhakov, S.A., Vasilenko, O.V., Voloshiuk, S.G., Glaskova-Stepanenko, I.S., Duvakin, I.A., Ishkov, A.G., Kabanov, A.V., Kabanov, V.A., Klinskii, E.Y., Kravtsova, T.N., Petrov, R.V., Sveshnikov, P.G., Severin, E.S. (1990) Respeprins - a new type of compound with targeted action. *Biomed. Science* 1 (2), 155-159.

267. Alakhov, V.Y., Kabanov, A.V., Batrakova, E.V., Koromyslova, I.A., Levashov, A.V., Severin, E.S. (1990) Increasing cytostatic effects of ricin A chain and Staphylococcus aureus enterotoxin A through in vitro hydrophobization with fatty acid residues. *Biotechnol. Appl. Biochem.* 12 (1), 94-98.

268. Kabanov, A.V., Ovcharenko, A.V., Melik-Nubarov, N.S., Bannikov N.L., Lisok TP, Klyushnenkova, E.V., Cherchenko, NG, Alakhov, V.Y., Kiselev, V.I., Sveshnikov, P.G., Levashov, A.V., Kiselev, O.I., Severin, E.S.

¹⁰ G Weber, ed. Pergamon Press. Oxford, NY, Frankfurt, Seoul, Sydney, Tokyo.

- (1990) Effective inhibition of virus reproduction by hydrophobized antiviral antibodies. *Biomed. Science* 1 (1), 63-67.
269. Kabanov, A.V., Vinogradov, S.V., Ovcharenko, A.V., Krivonos, A.V., Melik-Nubarov, N.S., Kiselev, V.I., Severin E.S. (1990) Antisense oligonucleotides modified at 5'-end by fatty radicals effectively inhibit reproduction of influenza virus. *Coll. Czech. Chem. Commun.* 55, 587-589.
270. Kabanov, A.V., Vinogradov, S.V., Ovcharenko, A.V., Krivonos, A.V., Melik-Nubarov, N.S., Kiselev, V.I., Severin E.S. (1990) A new class of antivirals: antisense oligonucleotides combined with a hydrophobic substituent effectively inhibit influenza virus reproduction and synthesis of virus-specific proteins in MDCK cells. *FEBS Lett.* 259 (2), 327-330.
271. Kabanov, A.V., Nametkin, S.N., Klyachko, N.L., Levashov, A.V. (1990) The principal difference in regulation of the catalytic activity of water soluble and membrane forms of enzymes in reversed micelles. γ -Glutamyltransferase and aminopeptidase. *FEBS Lett.* 267 (2), 236-238.
272. Kabanov, A.V., Levashov, A.V., Khrutskaya, M.M., Kabanov, V.A. (1990) Tailoring of macromolecule conjugates using reversed micelles as matrix microreactors. *Macromol. Chem.* 191, 2801-2814.
273. Klyachko, N.L., Pshezhetskii, A.V., Kabanov, A.V., Vakula, S.V., Martinek, K., Levashov, A.V. (1990) Enzymatic catalysis in surfactant aggregates: optimal structure of surfactant matrix. *Biol. Membrany* (Russian) 7, 467-472.
274. Alakhov, V.Y., Kabanov, A.V., Kravtsova, T.N., Levashov, A.V., Severin E.S. (1989) The role of carbohydrate binding site of the *Staphylococcus aureus* enterotoxin A in its interaction with lymphoid cells and the effects of hydrophobic modification on the toxin biological activity. *Biol. Membrany* (Russian) 6, 582-586.
275. Kabanov, A.V., Levashov, A.V., Alakhov, V.Y., Kravtsova, T.N., Martinek, K. (1989) Hydrophobized proteins penetrating lipid membranes. *Coll. Czech. Chem. Commun.* 54, 835-837.
276. Kabanov, A.V., Khrutskaya, M.M., Budavari, M.I., Eremin, S.A., Klyachko, N.L., Levashov, A.V. (1989) Homogeneous immunoenzyme analysis in reverse micelle systems of surface-active compounds in organic solvents. *Dokl. Acad. Nauk SSSR, Ser. Biokhimiya* (Russian) 305 (5), 1253-1256.
277. Kabanov, A.V., Kiselev, V.I., Chikindas, M.L., Astafieva I.V., Glukhov, A.I., Gordeev, S.A., Izumrudov, V.A., Zezin, A.B., Levashov, A.V., Severin, E.S., Kabanov, V.A. (1989) Increasing of transforming activity of plasmid DNA by incorporating it into an interpolyelectrolyte complex with a carbon chain polycation. *Dokl. Akad Nauk SSSR* (Russian) 306 (1), 226-229 (English edition: *Doklady Biochemistry* 306, 133-136 (1989)).
278. Kabanov, A.V., Ovcharenko, A.V., Melik-Nubarov, N.S., Bannikov, N.L., Alakhov, V.Y., Kiselev, V.I., Sveshnikov, P.G., Kiselev, O.I., Levashov, A.V., Severin E.S. (1989) Fatty acid acylated antibodies against virus suppress its reproduction in cells. *FEBS Lett.* 250 (2), 238-240.
279. Kabanov, A.V., Nametkin, S.N., Evtushenko, G.N., Chernov, N.N., Klyachko, N.L., Levashov, A.V., Martinek, K. (1989) A new strategy for the study of oligomeric enzymes: γ -glutamyltransferase in reversed micelles of surfactants in organic solvents. *Biochim. Biophys. Acta* 996 (3), 147-152.
280. Kabanov, A.V., Khrutskaya, M.M., Eremin, S.A., Klyachko, N.L., Levashov, A.V. (1989) A new way in homogeneous immunoassay. Reversed micellar systems as a media for analysis. *Anal. Biochem.* 181 (1), 145-148.
281. Kabanov, A.V., Chekhonin, V.P., Alakhov, V.Y., Batrakova, E.V., Lebedev, A.S., Melik-Nubarov, N.S., Arzhakov, S.A., Levashov, A.V., Morozov, G.V., Severin, E.S., Kabanov, V.A. (1989) The neuroleptic activity of haloperidol increases after its solubilization in surfactant micelles. Micelles as microcontainers for drug targeting. *FEBS Lett.* 258 (2), 343-345.
282. Nametkin, S.N., Kabanov, A.V., Evtushenko, G.N., Chernov, N.N., Berezov, T.T., Schiegolev, A.A., Ryzhova, V.V., Klyachko, N.L., Martinek, K., Levashov, A.V. (1989) Regulation of the supramolecular structure and the catalytic activity of gamma-glutamyltransferase in the reversed micelle system. *Bioorg. Khim.* (Russian) 15 (1), 70-77.

283. Pshezhetskii, A.V., Klyachko, N.L., Kabanov, A.V., Bushueva, M.V., Ledenev, A.N., Ruuge, E.K., Martinek, K., Levashov, A.V. (1989) Effect of structural organization of the enzyme lipid environment on their catalytic activity and conformational mobility. The native and chemically hydrophobized α -chymotrypsin in the ternary AOT-water-octane system. *Biokhimiya* (Russian) 54, 1790-1796.
284. Severin E.S., Alakhov, V.Y., Kondratiev, A.D., Nesterova, M.V., Kabanov, A.V. (1989) Mechanisms of conduction of regulatory signal into the cell. *Vestnik Acad. Med. Nauk SSSR* (Russian), N 12, 63-70.
285. Alakhov, V.Y., Arzhakov, S.A., Vasilenko, O.V., Voloshiuk, S.G., Glaskova-Stepanenko, I.S., Duvakin, I.A., Ishkov, A.G., Kabanov, A.V., Kabanov, V.A., Klinskii, E.Y., Kravtsova, T.N., Petrov, R.V., Sveshnikov, P.G., Severin, E.S. (1988) A new principle for the creation of immunotherapeutic compounds with targeted action. Physiologically active substances reversibly shielded by target recognizing macromolecules. *Dokl. Acad. Nauk SSSR, Ser. Biokhimiya* (Russian) 303, 1494-1497 738 (English edition: *Doklady Biochemistry* 303, 423-426 (1989)).
286. Kabanov, A.V., Alakhov, V.Y., Klinskii, E.Y., Khrutskaya, M.M., Rakhnyanskaya, A.A., Polinskii, A.S., Yaroslavov, A.A., Severin, E.S., Levashov, A.V., Kabanov, V.A. (1988) Construction of conjugates of natural and synthetic macromolecules using inverted micelles as microreactors. *Dokl. Acad. Nauk SSSR* (Russian) 302, 735-738 (English edition: *Doklady Biochemistry* 302 (3), 315-317 (1988)).
287. Kabanov, A.V., Nametkin, S.N., Matveeva, E.G., Klyachko, N.L., Martinek, K., Levashov, A.V. (1988) Relaxation phenomena in systems of protein-containing reverse micelles of surfactants in organic solvents. *Mol. Biol. (Moscow)* 22 (2), 473-484 (English edition: *Molecular Biology (Moscow)* 22, 382-391 (1988)).
288. Kabanov, A.V., Levashov, A.V., Klyachko, N.L., Nametkin, S.N., Pshezhetskii, A.V., Martinek, K. (1988) Enzymes entrapped in reversed micelles of surfactants in organic solvents: A theoretical treatment of the catalytic activity regulation. *J. Theor. Biol.* 133, 327-348.
289. Lukyanov, A.N., Klibanov, A.L., Kabanov, A.V., Torchilin V.P., Levashov, A.V., Martinek, K. (1988) Phospholipids covalent binding with proteins in system of reverse micelles. *Bioorg. Khim.* (Russian) 14 (5), 670-674.
290. Pshezhetskii, A.V., Kabanov, A.V., Klyachko, N.L., Berezin I.V., Martinek K., Levashov, A.V. (1988) A test for membrane-activity of enzymes: regulation of their catalytic activity by the matrix structure in a system surface-active agent-water-organic solvent. *Dokl. Acad. Nauk SSSR, Ser. Biokhimiya* (Russian) 298 (5), 1263-1266 (English edition: *Doklady Biochemistry* 328, 44-46 (1988)).
291. Kabanov, A.V., Levashov, A.V., Martinek, K. (1987) Transformation of water-soluble enzymes into membrane active form by chemical modification. *Ann NY Acad Sci* 501, 63-66.
292. Kabanov, A.V., Klibanov, A.L., Torchilin V.P., Martinek K., Levashov, A.V. (1987) Efficiency of protein amino group acylation with fatty acid chlorides in reversed micelles of Aerosol OT in octane. *Bioorg. Khim.* (Russian) 13, 1321-1324.
293. Kabanov, A.V., Klyachko, N.L., Pshezhetskii, A.V., Nametkin, S.N., Martinek, K., Levashov, A.V. (1987) Kinetic regularities of enzymatic catalysis in systems of surfactant reversed micelles in organic solvents. *Mol. Biol. (Moscow)* 21, 275-286 (English edition: 21, 231-241 (1987)).
294. Klyachko, N.L., Bogdanova, N.G., Levashov, A.V., Kabanov, A.V., Pshezhetskii, A.V., Khmel'nitskii, Y.L., Martinek, K., Berezin, I.V. (1987) Enzymatic catalysis in colloid solution of glycerol in organic solvent. *Dokl. Acad. Nauk SSSR, Ser. Biokhimiya* (Russian) 297, 483-487.
295. Kabanov, A.V., Levashov, A.V., Martinek K. (1986) Giving of membrane active properties to water soluble enzymes via their artificial hydrophobization - a new approach to regulation of the kinetic parameters of enzymatic reactions in the systems "Surfactant-water-organic solvent". *Vestnik MGU, Ser. II, Khimiya* (Russian) 27, 591-594.
296. Klyachko, N.L., Levashov, A.V., Pshezhetskii, A.V., Bogdanova, N.G., Kabanov, A.V., Berezin I.V., Khmel'nitskii, Y.L., Zharinova, I.N., Martinek, K. (1986) Enzyme catalysis in aggregates of surfactants with different structure: micellar, lamellar, cylindrical (hexagonal). *Dokl. Acad. Nauk SSSR, Ser. Biokhimiya* (Russian) 289, 1266-1270 (English edition: *Doklady Biochemistry* 289, 275-278 (1987)).

297. Rakhimov, M.M., Tuichibaev, M.U., Gorbataya, O.N., Kabanov, A.V., Levashov, A.V., Martinek, K. (1986) Phospholipase A2 from the venom of big hornet *Vespa Orientalis* in the system of hydrated reversed micelles of Triton X-100 and phosphatidylcholine in benzene. *Biol. Membrany* (Russian) 3, 1030-1036 ((English edition: *Arch. Sov. Sci., Biol. Membranes* 3, 1644-1657 (1990)).
298. Kabanov, A.V., Nametkin, S.N., Levashov, A.V., Martinek, K. (1985) Transmembrane transport of artificially hydrophobized proteins (enzymes). *Biol. Membrany* (Russian) 2, 985-995 (English edition: *Arch. Sov. Sci., Biol. Membranes* 2, 1769-1785 (1989)).
299. Levashov, A.V., Kabanov, A.V., Nametkin, S.N., Martinek K., Berezin, I.V. (1985) Translocation of hydrophobized proteins (enzymes) into liposomes. *Dokl. Acad. Nauk SSSR, Ser. Biokhimiya* (Russian) 284 (3), 755-758 (English edition: *Doklady Biochemistry* 284, 306-309 (1985)).
300. Levashov, A.V., Kabanov, A.V., Khmel'nitskii, Y.L., Berezin, I.V., Martinek, K. (1984) Chemical modification of proteins (enzymes) with water-insoluble reagents. *Dokl. Acad. Nauk SSSR, Ser. Biokhimiya* (Russian) 278 (1), 246-248 (English edition: *Doklady Biochemistry* 278, 295-297 (1985)).

Reviews and Concept Papers (peer reviewed):

301. Golovin YI, Golovin DYu, Vlasova KYu, Veselov MM, Usvaliev AD, Kabanov AV, Klyachko NL (2021) Non-heating alternating magnetic field nanomechanical stimulation of biomolecule structures via magnetic nanoparticles as the basis for future low-toxic biomedical applications. *Nanomaterials* (Basel) 11(9):2255. doi: 10.3390/nano11092255. PMID: 34578570 PMCID: PMC8470408
302. Hwang D, Ramsey JD, Kabanov AV (2020) Polymeric micelles for the delivery of poorly soluble drugs: From nanoformulation to clinical approval. *Adv. Drug Deliv. Rev.* S0169-409X(20)30133-2 DOI: 10.1016/j.addr.2020.09.009 PMID: 32980449
303. Golovin YI, Zhigachev AO, Golovin DY, Gribovskiy SL, Kabanov AV, Klyachko NL (2020) Straintronics for nanomedicine: Manipulating biochemical systems via controllable macromolecular nanodeformation. *Bull. Russ. Acad. Sci. Phys.* 84, 815–819. doi: 10.3103/S1062873820070102
304. Golovin YI, Klyachko NL, Zhigachev AO, Gribovskii SL, Efremova MV, Majouga AG, Kabanov AV (2019) Selective deformation of single macromolecules and biomolecular structures as a method for remote control of their properties and functions for next-generation medicine. *Russ. Metall.* 2019, 4, 374–384. <https://doi.org/10.1134/S0036029519040116>
305. Patel S, Kim J, Herrera M, Mukherjee A, Kabanov AV, Sahay G (2019) Brief update on endocytosis of nanomedicines. *Adv. Drug Deliv. Rev.*, 144:90-111. doi: 10.1016/j.addr.2019.08.004.
306. Golovin YI, Klyachko NL, Majouga AG, Gribovskii SL, Golovin DY, Zhigachev AO, Shuklinov AV, Efremova MV, Veselov MM, Vlasova KY, Usvaliev AD, Le-Deygen IM, Kabanov AV (2018) New Approaches to Nanotheranostics: Polyfunctional Magnetic Nanoparticles Activated by Non-Heating Low-Frequency Magnetic Field Control Biochemical System with Molecular Locality and Selectivity, *Nanotechnologies in Russia*, 13(5-6) 215-239 DOI:[10.1134/S1995078018030060](https://doi.org/10.1134/S1995078018030060).
307. Golovin YI, Zhigachev AO, Efremova MV, Majouga AG, Kabanov AV, Klyachko NL (2018) Ways and Methods for Controlling Biomolecular Structures Using Magnetic Nanoparticles Activated by an Alternating Magnetic Field, *Nanotechnologies in Russia*, 13(5-6) 295-304. DOI:[10.1134/S1995078018030072](https://doi.org/10.1134/S1995078018030072)
308. Lorson T, Lübtow MM, Wegener E, Haider MS, Borova S, Nahm D, Jordan R, Sokolski-Papkov M, Kabanov AV, Luxenhofer R. (2018) Poly(2-oxazoline)s based biomaterials: A comprehensive and critical update. *Biomaterials* 178:204-280. doi: 10.1016/j.biomaterials.2018.05.022.
309. Gaymalov Z, Kabanov A (2017) RECOPE: How to succeed in bringing ideas from academia to market without compromising ingenuity. *Nanomedicine: Nanotechnology, Biology and Medicine* 13(3):795-800. doi: 10.1016/j.nano.2016.10.007. Epub 2016 Oct 29
310. Golovin YI, Klyachko NL, Majouga AG, Sokolsky M, Kabanov AV (2017) Theranostic multimodal potential of magnetic nanoparticles actuated by non-heating low frequency magnetic field in the new-generation nanomedicine. *J. Nanoparticle Research*, 19(2): 63. doi: 10.1007/s11051-017-3746-5

311. Golovin YI, Gribanovsky SL, Golovin DY, Klyachko NL, Majouga AG, Master AM, Sokolsky M, Kabanov AV (2015) Towards nanomedicines of the future: Remote magneto-mechanical actuation of nanomedicines by alternating magnetic fields. *J Control Release*. 219:43-60. doi: 10.1016/j.jconrel.2015.09.038. PMID: PMC4841691
312. Mitragotri S, Anderson DG, Chen X, Chow EK, Ho D, Kabanov AV, Karp JM, Kataoka K, Mirkin CA, Petrosko SH, Shi J, Stevens MM, Sun S, Teoh S, Venkatraman SS, Xia Y, Wang S, Gu Z, Xu C (2015) Accelerating the translation of nanomaterials in biomedicine. *ACS Nano* 9(7):6644-54. doi: 10.1021/acsnano.5b03569.
313. Alakhova, D., Kabanov, A.V. (2014) Pluronics and MDR reversal - an update. *Mol Pharm*. 11(8): 2566-78. PMID: PMC4122590
314. Singh, D., McMillan, J.M., Liu, X.-M., Vishwasrao, H.M., Kabanov A.V., Sokolsky-Papkov, M., Gendelman, H.E. (2014) Formulation design facilitates magnetic nanoparticle delivery to diseased cells and tissues. *Nanomedicine*, 9 (3), 469-85. doi: 10.2217/nnm.14.4. PMID: 24646020
315. Singh, D., McMillan, J.M., Liu, X.-M., Vishwasrao, H.M., Kabanov A.V., Sokolsky-Papkov, M., Gendelman, H.E. (2014) Bench-to-bedside translation of magnetic nanoparticles. *Nanomedicine*, 9 (4), 501-16. doi: 10.2217/NMM.14.5. PMID: PMC4150086
316. Yi, X., Manickam, D.S., Brynskikh, A., Kabanov, A.V. (2014) Agile delivery of protein therapeutics to CNS. *J. Control. Release*. 190:637-63, doi: 10.1016/j.jconrel.2014.06.017. PMID: PMC4142106
317. Luxenhofer, R., Huber, S., Hytry, J., Tong, J., Kabanov, A.V., Jordan, R. (2013) Chiral and water-soluble poly (2-oxazoline)s. *J. Polymer Sci. Part A: Polymer Chemistry* 51 (3), 732-8.
318. Oberoi, H.S., Nukolova, N.V., Kabanov, A.V., Bronich, T.K. (2013) Nanocarriers for delivery of platinum anticancer drugs. *Adv. Drug Deliv. Rev.* 65(13-14):1667-85. doi: 10.1016/j.addr.2013.09.014 PMID: 24113520.
319. Yi, X., Kabanov, A.V. (2013) Brain delivery of proteins via their fatty acid and block copolymer modifications. *J. Drug Targeting* 21 (10), 940-55.
320. Zhao, Y., Alakhova, D.Y., Kabanov, A.V. (2013) Can nanomedicines kill cancer stem cells? *Adv. Drug Deliv. Rev.* 65(13-14):1763-83. doi: 10.1016/j.addr.2013.09.016, PMID: 24120657
321. Banks, W.A., Gertler, A., Solomon, G., Niv-Spector, L., Yacobovitz, M., Yi, X., Batrakova, E.V., Vinogradov, S.V., Kabanov, A.V. (2011) Principles of strategic drug delivery to the brain (SDDDB): Development of anorectic and orexigenic analogs of leptin. *Physiol. Behav.* 105(1):145-9. PMID: PMC3392966
322. Batrakova, E.V., Gendelman, H.E., Kabanov, A.V. (2011) Cell-mediated delivery of nanoformulated drugs, *Exp. Opin. Drug Del.* 8(4):415-33. PMID: PMC3062753
323. Sahay, G., Alakhova, D.Y., Kabanov, A.V. (2010) Endocytosis of nanomedicines, *J. Control. Release*, 145(3):182-95 PMID: PMC2667955
324. Chekhonin, V.P., Dmitrieva, T.B., Zhirkov, Yu.A., Kabanov, A.V., Gendelman H.E. (2009) [Nanosystems and targeted transport of medicinal preparations to the brain]. *Vestn. Ross. Akad. Med. Nauk*, (2):32-40. Review. Russian. PMID: 19280985
325. Kabanov, A.V., Vinogradov, S.V. (2009) Nanogels as pharmaceutical carriers: Finite networks of infinite capabilities. *Angew. Chem. Int. Ed. Engl.* 48(30):5418-5429. PMID: PMC2872506
326. Batrakova, E.V., Kabanov, A.V. (2008) Pluronic block copolymers: Evolution of drug delivery concept from inert nanocarriers to biological response modifiers, *J. Control. Release*, 130(2):98-106. PMID: PMC2678942
327. Gilmore, J.L. Yi, X., Quan, L., Kabanov, A.V. (2008) Novel nanomaterials for clinical neuroscience, *J. Neuroimmune Pharmacol.* (2): 83-94 PMID: PMC2566785
328. Batrakova, E.V., Kabanov, A.V. (2007) Polymers for CNS drug delivery. *Pharmaceutical Technology Europe* 19(5):23-31. PMID: PMC2575076

329. Kabanov, A.V., Gendelman, H.E. (2007) Nanomedicine in the diagnosis and therapy of neurodegenerative disorders, *Progr. Polym. Sci.* 32(8-9):1054-82. PMID: PMC2838200
330. Kabanov, A.V., Batrakova, E.V., Sherman, S., Alakhov, V.Y. (2006) Polymer genomics, *Adv. Polym. Sci.* 193:173-98. PMID: PMC2566789
331. Kabanov, A.V. (2006) Polymer genomics: An insight into pharmacology and toxicology of nanomedicines. *Adv. Drug Del. Rev.* 58 (15):1597-621. [doi:10.1016/j.addr.2006.09.019](https://doi.org/10.1016/j.addr.2006.09.019); PMID: PMC1853357
332. Uversky, V.N., Kabanov, A.V., Lyubchenko, Y.L. (2006) Nanotools for megaproblems: Probing protein misfolding diseases using nanomedicine modus operandi. *J. Proteome Res.* 5(10):2505-22. PMID: PMC1880889
333. Kabanov, A.V., Batrakova, E.V., Sriadibhatla, S., Yang, Z. Kelly, D., Alakhov, V.Y. (2005) Polymer genomics: shifting the gene and drug delivery paradigms. *J. Control. Release* 101(1-3):259-71.
334. Kabanov, A., Zhu, J., Alakhov, V. (2005) Pluronic block copolymers for gene delivery, *Adv. Genet.* 53:231-61.
335. Kabanov, A.V., Batrakova, E.V. (2004) New technologies for drug delivery across the blood brain barrier, *Curr. Pharm. Design* 10, 1355-1363. PMID: PMC2711206.
336. Gebhart, C.L., Kabanov, A.V. (2003) Perspectives on polymeric gene delivery, *J. Bioact. Biocompat. Mat.* 18 (2) 147-165.
337. Kabanov, A.V., Batrakova, E.V., Miller, D.W. (2003) Pluronic((R)) block copolymers as modulators of drug efflux transporter activity in the blood-brain barrier, *Adv. Drug Del. Rev.* 55 (1), 151-164
338. Kabanov, A.V., Lemieux, P., Vinogradov, S.V., Alakhov, V.Y. (2002) Pluronic® block copolymers: novel functional molecules for gene therapy, *Adv. Drug Del. Rev.* 54(2), 223-233.
339. Kabanov, A.V., Alakhov, V.Y. (2002) Pluronic® block copolymers in drug delivery: From micellar nanocontainers to biological response modifiers, *Crit. Rev. Ther. Drug Carrier Syst.* 19 (1) 1-73
340. Kabanov, A.V., Batrakova, E.V., Alakhov, V.Y. (2002) Pluronic® block copolymers as novel polymer therapeutics for drug and gene delivery, *J. Control. Release* 82 (2-3), 189-212.
341. Kabanov, A.V., Batrakova, E.V., Alakhov, V.Y. (2002) Pluronic® block copolymers for overcoming drug resistance in cancer, *Adv. Drug Del. Rev.* 54 (5), 759-779.
342. Vinogradov, S.V., Bronich, T.K., Kabanov, A.V. (2002) Nanosized cationic hydrogels for drug delivery: preparation, properties and interactions with cells, *Adv. Drug Del. Rev.* 54 (1), 135-147
343. Alakhov, V., Pietrzynski, G., Kabanov, A. (2001), Combinatorial approaches to formulation development, *Curr. Opin. Drug Discov. Devel.* 4(4), 493-501
344. Alakhov, V., Lemieux, P., Klinski, E., Pietrzynski, G., Kabanov, A. (2001) Block copolymeric biotransport carriers as versatile vehicles for drug delivery, *Expert Opin. Biol. Ther.* 1(4), 583-602
345. Kabanov, A.V. (1999) Taking polycation gene delivery systems from in vitro to in vivo. *Pharm. Sci. Technol. Today* 2 (9), 365-372.
346. Miller, D.W., Kabanov, A.V. (1999) Potential applications of polymers in the delivery of drugs to the central nervous system. *Coll. Surf. B: Biointerfaces* 16, 321-330.
347. Alakhov, V.Y., Kabanov, A.V. (1998) Block copolymeric biotransport carriers as versatile vehicles for drug delivery. *Expert Opin. Investig. Drugs* 7, 1453-1473
348. Kabanov, A.V., Kabanov, V.A. (1998) Interpolyelectrolyte and block ionomer complexes for gene delivery: physico-chemical aspects. *Adv. Drug Del. Rev.* 30 (1-3), 49-60.
349. Kabanov, A.V., Kabanov, V.A. (1995) DNA complexes with polycations for the delivery of genetic material into cells. *Bioconjug. Chem.* 6 (1), 7-20.

350. Kabanov, V.A., Kabanov, A.V. (1995) Supramolecular devices for targeting DNA into cells: Fundamentals and perspectives. *Macromol. Chem., Macromol. Symp.* 98, 601-613.
351. Kabanov, A.V., Alakhov, V.Y. (1994) New approaches to targeting of bioactive compounds. *J. Control. Release* 28, 15-35.
352. Kabanov, A.V., Kabanov, V.A. (1994) Interpolyelectrolyte complexes of nucleic acids as means for targeted delivery of genetic material to the cell (review). *Vysokomol. Soed. (Russian)* 36, 198-211 (English edition: *Polym. Sci., Ser. A, B* 36, 155-170 (1994)).
353. Kabanov, A.V., Levashov, A.V., Alakhov, V.Y., Martinek K., Severin E.S. (1990) Fatty acylation of proteins for translocation across cell membranes. *Biomed. Science* 1 (1), 33-36.
354. Kabanov, A.V., Levashov, A.V., Alakhov, V.Y. (1989) Lipid modification of proteins and their membrane transport. *Protein Eng.* 3 (1), 39-42.
355. Martinek, K., Klyachko, N.L., Kabanov, A.V., Khmel'nitskii, Y.L., Levashov, A.V. (1989) Micellar enzymology: its relation to membranology. *Biochim. Biophys. Acta* 981 (2), 161-172.

Technical Supplements and Protocol papers:

356. Vinod N, Hwang D, Azam SH, Van Swearingen AED, Wayne E, Fussell SC, Sokolsky-Papkov M, Pecot CV, Kabanov AV (2021) Preparation of an orthotopic, syngeneic model of lung adenocarcinoma and the testing of the antitumor efficacy of poly(2-oxazoline) formulation of chemo and immunotherapeutic agents. *Bio Protoc.* 11(6):e3953. doi: 10.21769/BioProtoc.3953. PMID: 33855115; PMCID: PMC8032483
357. Vinod N, Hwang D, Azam SH, Van Swearingen AED, Wayne E, Fussell SC, Sokolsky-Papkov M, Pecot CV, Kabanov AV (2021) Preparation and characterization of poly(2-oxazoline) micelles for the solubilization and delivery of water insoluble drugs. *Bio Protoc.* 11(6):e3959. doi: 10.21769/BioProtoc.3959. PMID: 33855119; PMCID: PMC8032494.
358. Mahajan V, Gaymalov Z, Alakhova D, Gupta R, Zucker IH, Kabanov AV (2016) Data on macrophage mediated muscle transfection upon delivery of naked plasmid DNA with block copolymers. *Data Brief.* 2016 7:1269-82. doi: 10.1016/j.dib.2016.03.087. eCollection 2016.

Preprints (non peer reviewed):

359. Yamaleyeva DN, Makita N, Hwang D, Haney MJ, Jordan R, Kabanov AV. Poly(2-oxazoline)-based polyplexes as a PEG-free plasmid DNA delivery platform. bioRxiv 2022.12.18.518592; doi: <https://doi.org/10.1101/2022.12.18.518592>
360. Lim C, Hwang D, Yazdimamaghani M, Atkins HM, Hyun H, Shin Y, Ramsey JD, Perou CM, Sokolsky-Papkov M, Kabanov AV. High-dose paclitaxel and its combination with CSF1R inhibitor in polymeric micelles for chemoimmunotherapy of triple negative breast cancer bioRxiv 2022.08.12.503695; doi: <https://doi.org/10.1101/2022.08.12.503695>
361. Fay JM, Lim C, Finkelstein A, Batrakova E, Kabanov AV. PEG-free polyion complex nanocarriers for brain-derived neurotrophic factor. bioRxiv 2022.05.23.492849; doi: <https://doi.org/10.1101/2022.05.23.492849> Now published in *Pharmaceutics* doi: [10.3390/pharmaceutics14071391](https://doi.org/10.3390/pharmaceutics14071391)
362. Ramsey JD, Stewart JE, Madden EA, Lim C, Hwang D, Heise MT, Hickey AJ, Kabanov AV. Nanoformulated Remdesivir with Extremely Low Content of Poly(2-oxazoline) - Based Stabilizer for Aerosol Treatment of COVID-19. bioRxiv 2022.01.21.477258; doi: <https://doi.org/10.1101/2022.01.21.477258> Now published in *Macromol Biosci* <https://doi.org/10.1002/mabi.202200056>
363. Rakhimbekova A., Lopukov A., Klyachko N., Kabanov A., Madzhidov T.I., Tropsha A. Efficient Design of Peptide-Binding Polymers Using Active Learning Approaches. bioRxiv 2021.12.17.473241; doi: <https://doi.org/10.1101/2021.12.17.473241> Now published in *JCR* <https://doi.org/10.1016/j.jconrel.2022.11.023>
364. Lim C, Dismuke T, Malawsky D, Ramsey JD, Hwang D, Godfrey VL, Kabanov AV, Gershon TR, Sokolsky-Papkov M. Enhancing CDK4/6 inhibitor therapy for medulloblastoma using nanoparticle delivery and scRNA-

- seq-guided combination with sapanisertib. bioRxiv 2021.06.09.447757; doi: <https://doi.org/10.1101/2021.06.09.447757> Now published in Sci Adv doi: [10.1126/sciadv.abl5838](https://doi.org/10.1126/sciadv.abl5838)
365. Lim C, Ramsey JD, Hwang D, Teixeira SCM, Poon C-D, Strauss JD, Sokolsky-Papkov M, Kabanov AV. Drug-dependent morphological transitions in spherical and worm-like polymeric micelles define stability and pharmacological performance of micellar drugs. bioRxiv 2021.06.10.447962; doi: <https://doi.org/10.1101/2021.06.10.447962> Now published in Small doi: 10.1002/smll.202103552
366. Hwang D, Vinod N, Skoczen SL, Ramsey JD, Snapp KS, Montgomery SA, Wang M, Lim C, Frank JE, Sokolsky-Papkov M, Li Z, Yuan H, Stern ST, Kabanov AV. Bioequivalence Assessment of High-Capacity Polymeric Micelle Nanoformulation of Paclitaxel and Abraxane® in Rodent and Non-Human Primate Models Using a Stable Isotope Tracer Assay bioRxiv 2021.08.20.457164; doi: <https://doi.org/10.1101/2021.08.20.457164> Now published in Biomaterials doi: 10.1016/j.biomaterials.2021.121140
367. Vinod V, Hwang D, Azam SH, Van Swearingen AED, Wayne E, Fussell SC, Sokolsky-Papkov M, Pecot CV, Kabanov AV. High Capacity poly(2-oxazoline) formulation of TLR 7/8 agonist extends survival in a chemo-insensitive, metastatic model of Lung Adenocarcinoma. bioRxiv 2019.12.12.874198; doi: <https://doi.org/10.1101/2019.12.12.874198> Now published in Science Advances doi: 10.1126/sciadv.aba5542
368. Hwang D, Dismuke T, Tikunov A, Rosen EP, Kagel JR, Ramsey JD, Lim C, Zamboni W, Kabanov AV, Gershon TR, Sokolsky-Papkov M. Poly(2-oxazoline) nanoparticle delivery enhances the therapeutic potential of vismodegib for medulloblastoma by improving CNS pharmacokinetics and reducing systemic toxicity. bioRxiv 2020.04.30.068726; doi: <https://doi.org/10.1101/2020.04.30.068726> Now published in Nanomedicine: Nanotechnology, Biology and Medicine doi: 10.1016/j.nano.2020.102345
369. Shats I, Liu J, Williams JG, Deterding LJ, Lim C, Lee E, Fan W, Sokolsky M, Kabanov AV, Locasale JW, Li X. Bacteria boost mammalian host NAD metabolism by engaging the deamidated biosynthesis pathway. bioRxiv 489674; doi: <https://doi.org/10.1101/489674> Now published in Cell Metabolism doi: 10.1016/j.cmet.2020.02.001
370. Bronich TK, Kabanov AV (2004) Novel block ionomer micelles with cross-linked ionic cores. *Polym. Prepr.* 45 (2) 384-385.
371. Kabanov, A.V., Sriadibhatla, S., Gebhart, C.L., Yang, Z., Alakhov, V.Y. (2004) Effect of Pluronic block copolymers on gene expression. *Polym. Prepr.* 45(2), 392-393.
372. Kabanov, A.V., Batrakova, E.V., Sriadibhatla, S., Yang, Z., Kelly, D.L., Alakhov, V.Y. (2004) Polymer genomics: shifting the drug delivery paradigm. *Polym. Prepr.* 45(2), 442-443.
373. Lysenko, E.A., Chelushkin, P.S., Bronich, T.K., Eisenberg, A., Kabanov, V.A., Kabanov, A.V. (2004) Soluble nanoparticles from block ionomer micelles, oppositely charged complexing agents. *Polym. Prepr.* 45(2), 244-245.
374. Solomatin, S.V., Bronich, T.K., Kabanov, V.A., Eisenberg, A., Kabanov, A.V. (2004) Block ionomer complexes produced from combinations of surfactants: particle morphology and surfactant mixing. *Polym. Prepr.* 45 (2) 394-395.
375. Vinogradov, S.V., Kabanov, A.V. (2004) Synthesis of nanogel carriers for delivery of active phosphorylated nucleoside analogues. *Polym. Prepr.* 45(2): 378-379.
376. Solomatin, S.V., Bronich, T.K., Kabanov, V.A., Eisenberg, A., Kabanov, A.V. (2003) Effect of salt and temperature on aggregation stability of block ionomer complexes, *Polym. Prepr.* 44(1), 642-643.
377. Kabanov, A.V., Gebhart CL, Bronich, T.K., Vinogradov, SV (2002) Polycations for gene delivery: problems and solutions, *Polym. Prepr.* 43(2), 669-670.
378. Bronich, T.K., Vinogradov, S.V., Kabanov, A.V. (2001) Interaction of dispersed copolymer networks with oppositely charged amphiphilic molecules, *Polym. Prepr.* 42(2), 81-82.
379. Solomatin, S.V., Bronich, T.K., Kabanov, V.A., Eisenberg, A., Kabanov, A.V. (2001) Block ionomer complexes: novel environmentally responsive materials, *Polym. Prepr.* 42(2), 107-108.

380. Gebhart, C., Sridibhatla, S., Vinogradov, S.V., Kabanov, A.V. (2001) Pluronic-polyethyleneimine conjugates for gene delivery: cell transport and transgene expression, *Polym. Prepr.* 42(2), 119-120.
381. Kabanov, A.V., Batrakova, E.V., Li, S., Alakhov, V.Y. (2001) Selective energy depletion and sensitization of multiple drug resistant cells by Pluronic block copolymers, *Macromol Symp* 172, 103-112.
382. Bronich, T.K., Kankia, B.I., Kabanov, A.V., Marky, L. (2000) A thermodynamic investigation of the interaction of polycations with DNA. *Polym. Prepr.* 41(2), 1611-1612.
383. Batrakova, E.V., Li, S., Alakhov, V.Y., Kabanov, A.V. (2000) Selective energy depletion and sensitization of multiple drug resistant cells by Pluronic block copolymers. *Polym. Prepr.* 41(2), 1639-1640.
384. Vinogradov, S., Batrakova, E., Kabanov, A.V. (2000) Novel drug delivery systems: Nanogel networks. *Polym. Prepr.* 41(2), 1641-1642.
385. Bronich, T.K., Ouyang, M., Eisenberg, A., Kabanov, V.A., Szoka, Jr. F.C., Kabanov, A.V. (2000) Reactive stabilization of vesicles from cationic surfactant self-assembled on anionic block ionomer template. *Polym. Prepr.* 41(2), 1645-1646.
386. Bronich, T.K., Nguyen, H-K., Eisenberg, A., Kabanov, A. (2000) Recognition of DNA topology in reactions between plasmid DNA and cationic copolymers. *Polym. Prepr.* 41(1), 1006-1007.
387. Kabanov, A.V., Bronich, T.K., Eisenberg, A., Kabanov, V.A. (2000) Novel nanocomposite materials based on block ionomer complexes. *Proc. Am. Chem. Soc., Division of Polymeric Materials: Science and Engineering* 82, 303-304.
388. Bronich, T.K., Nehls, A., Kabanov, V.A., Eisenberg, A., Kabanov, A.V. (1998) Novel block ionomer complexes for drug delivery, *Polym. Prepr.* 39/2, 222-223.
389. Kabanov, A., Bronich, T., Kabanov, V., Yu, K., Eisenberg, A. (1997) Vesicles from block ionomer complexes. *Polymer Preprints* 38/2, 648-649. (abstract in Abstracts of Papers 214th ACS National Meeting, Part 2, Las Vegas, NV, POLY 0328).
390. Kabanov, A. (1997) Novel lyophilic colloids and soluble complexes in drug delivery: an overview. *Proc Am Chem Soc, Division of Polymeric Materials: Science and Engineering* 76, 227. (abstract in Abstracts of Papers 213th ACS National Meeting, Part 2, San Francisco, CA, PMSE 0135)
391. Kabanov, A.V. (1993) Site specific drug targeting. In *CPhI '92 Conference Proceedings*, London: Eyre & Spottiswoode Ltd. pp. 89-96.
392. Kabanov, A.V. (1991) Reversed micelles as matrix microreactors for chemical processing of macromolecules. *Macromol Chem, Macromol Symp* 44, 253-264.
393. Kabanov, V.A., Kabanov, A.V., Astafieva, I.V. (1991) Complexes of DNA with synthetic polycations for cell transfection, *Polym Prepr*, 32/1, 592-593.
394. Tong, J, Yi, X., Kabanov, A.V., Liang, J. and Riffle, J. S. (2011) Novel superoxide dismutase-triblock copolyether conjugates for enhanced cellular delivery, *Polymer Preprints*, 52(2), 301-302.
395. Schulz, A., Han, Y., He, Z., Bronich, T.K., Kabanov, A.V., Luxenhofer, R., Jordan, R. (2012) Poly(2-oxazoline)s: An all-round delivery system? *Polymer Preprints*, 53(1), 354-5.

Book chapters:

396. Kabanov A.V., Batrakova, E.V. (2017) Polymer nanomaterials for drug delivery across the blood brain barrier, In *Neuroimmune Pharmacology, Second Edition*, Ikezu, Tsuneya, Gendelman, Howard (Eds.), Springer, Springer International Publishing, Switzerland, pp. 847-868 DOI 10.1007/978-3-319-44022-4_50
397. Kabanov, A.V., Vinogradov, S.V. (2008) Nanogels as pharmaceutical carriers, In *Multifunctional Pharmaceutical Nanocarriers* (V. Torchilin, Ed.), Springer, New York, NY, pp. 67-80.
398. Kabanov A.V., Batrakova, E.V. (2008) Polymer nanomaterials, Chapter 47, In *Neuroimmune Pharmacology*, Ikezu, Tsuneya, Gendelman, Howard (Eds.), Springer, New York, NY, pp. 691-708

399. Batrakova, E.V., Kabanov, A.V. (2006) Strategies to overcome the blood-brain barrier, In *Enhancement in Drug Delivery* (E. Touitou, B.W. Barry, Eds.), CRC Press LLC, Boca Raton, FL, pp. 593-614.
400. Batrakova, E.V., Bronich, T.K., Vetro, J.A., Kabanov, A.V. (2006) Polymer micelles as drug carriers, In *Nanoparticulates as Drug Carriers* (V.P. Torchilin, Ed.), Imperial College Press, London, pp. 57-93.
401. Kabanov, A.V., Zhu, J. (2005) Pluronic® block copolymers for drug and gene delivery, In *Polymeric Drug Delivery Systems* (G. Kwon, Ed.), Taylor & Francis, Boca Raton, London, New York, Singapore, pp. 577-614.
402. Kabanov, A.V., Zhu, J., Alakhov, V.Y. (2005) Pluronic® block copolymers for gene delivery, In *Non-Viral Vectors for Gene Therapy* (L. Huang, M.-C. Hung, E. Wagner, Eds.), Elsevier, Amsterdam, Boston, Heidelberg, London, New York, Oxford, Paris, San Diego, San Francisco, Singapore, Sydney, Tokyo, pp. 231-262.
403. Kabanov, A.V., Sriadibhatla, S., Alakhov, V.Y. (2005) Pluronic® block copolymers for non-viral gene delivery. In *Polymeric Gene Delivery: Principles and Applications*. (Amiji, M.M., Ed.). CRC Press, LLC. Boca Raton, London, New York, Washington, D.C., pp. 313-328.
404. Kabanov, A.V., Batrakova, E.V., Alakhov, V.Y. (2004) Pluronic® block copolymers as novel polymer therapeutics for drug and gene delivery, In: *Carrier Based Drug Delivery* (S. Sonke, Ed.) ACS Symposium Series 879, ACS, Washington, DC, pp. 130-153.
405. Kabanov, A.V., Okano T. (2003) Challenges in polymer therapeutics: State of the art and prospects of polymer drugs. In: *Polymer Drugs in the Clinical Stage: Advantages and prospects* (H. Maeda, A. Kabanov, K. Kataoka, T. Okano, Eds.) Kluwer Academic/Plenum Publishers, pp. 1-27. (*Adv. Exp. Med. Biol.* 519, 1-27 (2003)).
406. Kabanov, A.V., Bronich, T.K. (2002) Structure, dispersion stability and dynamics of DNA and polycation complexes. In *Pharmaceutical Perspectives of Nucleic Acid-Based Therapeutics* (S.W. Kim, R. Mahato, Eds.) Taylor & Francis, London, New York, pp. 164-189.
407. Kabanov, A.V., Alakhov, V.Y. (2000) Micelles of amphiphilic block copolymers as vehicles for drug delivery. In *Amphiphilic Block Copolymers: Self-Assembly and Applications* (P Alexandridis, B Lindman, eds.) Elsevier, Amsterdam, Lausanne, New York, Oxford, Shannon, Singapore, Tokyo, pp. 347-376.
408. Seymour, L.W., Kataoka K., Kabanov, A.V. (1998) Cationic block copolymers as self-assembling vectors for gene delivery. In *Self-Assembling Complexes for Gene Delivery. From Laboratory to Clinical Trial* (AV Kabanov, LW Seymour and P Felgner, eds). John Wiley. Chichester, New York, Weinheim, Brisbane, Singapore, Toronto. pp. 219-239.
409. Khmel'nitskii, Y.L., Kabanov, A.V., Klyachko, N.L., Levashov, A.V., Martinek, K. (1989) Enzymatic catalysis in reversed micelles. In *Structure and Reactivity in Reverse Micelles* (MP Pileni, ed). Elsevier. Amsterdam, Oxford, NY, Tokyo. pp. 230-361.
410. Kabanov, A.V., Szoka, F.C., Seymour, L.W. (1998) Interpolyelectrolyte complexes for gene delivery: polymer aspects of transfection activity. In *Self-Assembling Complexes for Gene Delivery. From Laboratory to Clinical Trial* (AV Kabanov, LW Seymour and P Felgner, eds). John Wiley. Chichester, New York, Weinheim, Brisbane, Singapore, Toronto. pp. 197-218.
411. Kabanov, A.V. (1996) Reverse micelles (microcontainers for functional polymers). In *Polymeric Materials Encyclopedia* (J.C. Salamone, ed.). CRC Press: Boca Raton, New York, London, Tokyo. Vol 10, pp 7486-7494.
412. Kabanov, A.V. (1996) Polyelectrolyte complexes (targeting of nucleic acids) In *Polymeric Materials Encyclopedia* (JC Salamone, ed). CRC Press: Boca Raton, New York, London, Tokyo. Vol. 8, pp. 5777-5783.
413. Kabanov, A.V., Alakhov, V.Y. (1996) Block copolymer micelles (microcontainers for drug targeting) In *Polymeric Materials Encyclopedia* (JC Salamone, ed). CRC Press. Boca Raton, New York, London, Tokyo. Vol. 1, pp. 757-760.
414. Klyachko, N.L., Levashov, A.V., Kabanov, A.V., Khmel'nitskii, Y.L., Martinek, K. (1991) Catalysis by enzymes entrapped in hydrated surfactant aggregates having various structures in organic solvent. In *Kinetics and Catalysis in Microheterogeneous Systems* (M Gratzel and K Kalyansundaram, eds) Marcel and Dekker. New York. pp. 135-182.

Books and special journal issues edited:

415. Kabanov, A., Bronich, T. (Eds.) (2011) Eighth International Nanomedicine and Drug Delivery Symposium (NanoDDS'10). *J. Control. Release.* 153(1).
416. Kabanov, A.V. (Ed.) (2007) Fourth International Nanomedicine and Drug Delivery Symposium theme issue. *J. Control. Release* 121(1-2).
417. Ghandehari, H., Kabanov, A., Levon, K. (Eds.) (2006) Third International Nanomedicine and Drug Delivery Symposium theme issue. *J. Control. Release* 114(2):129-184.
418. Kabanov, A., Levon, K. (Eds.) (2006) Nanomedicine and Drug Delivery. *Curr. Pharm. Design*, 12 (36) 4669-4770.
419. Maeda, H., Kabanov, A., Kataoka, K., Okano, T. (Eds.) (2003) *Polymer Drugs in the Clinical Stage: Advantages and prospects.* Kluwer Academic/Plenum Publishers. 224 pp.
420. Kataoka, K., Kabanov, A.V. (Eds.) (1999) *Polymeric Micelles in Biology and Pharmaceutics. Special Issue: Colloids and Surfaces B: Biointerfaces.* Elsevier, Amsterdam, Lausanne, New York, Oxford, Shannon, Tokyo, 339 pp.
421. Kabanov, A.V., Seymour, L.W., Felgner, P. (Eds.) (1998) *Self-Assembling Complexes for Gene Delivery. From Laboratory to Clinical Trial.* John Wiley. Chichester, New York, Weinheim, Brisbane, Singapore, Toronto, 442 pp.

Editorials, Letters, Biographies and Others:

422. Kabanov A, Krasnok A, Seletskiy D (2021) Russia: scientists petition to end political persecution. *Nature* 591, 202 doi: <https://doi.org/10.1038/d41586-021-00594-y>
423. Alakhova DY, Kabanov AV (2015) Nanomedicine and nanotechnology are rapidly developing fields across the nation and worldwide *J. Control. Release.* 208:1. doi: 10.1016/j.jconrel.2015.04.044.
424. Kabanov A, Bronich T (2011) Eighth International Nanomedicine and Drug Delivery Symposium (NanoDDS'10). *J. Control. Release.* 153(1):1. Epub 2011 Jun 7. PMID: 21645563
425. Kabanov, A.V., Kirpichnikov, M.P., Khokhlov, A.R. (2009) Nanobiology for the pharmacology of cellular ion channels. *J Neuroimmune Pharmacol.* 4(1), 7-9; 2009 Jan 24. [Epub ahead of print]. PMID: 19169828
426. Gendelman, H.E., Kabanov, A., Linder, J. (2008) The promise and perils of CNS drug delivery: a video debate. *J Neuroimmune Pharmacol.* Jun;3(2):58. PMCID: PMC2629545
427. Kabanov, A.V., Khokhlov, A.R., Shibaev, V.P. (2007) Obituary: Professor Nikolai Plate (1934-2007). *Coll. Polym. Sci.* 285 (12), 1299-1300.
428. Kabanov, A.V., Khokhlov, A.R., Zezin, A.B. (2007) Professor Victor Kabanov (1934-2006) – Obituary. *J. of Polymer Science Part A – Polymer Chemistry*, (16), 3501-3502.
429. Kabanov, A.V. (2007) Preface. Fourth International Nanomedicine and Drug Delivery Symposium (NanoDDS'06). *J. Control. Release* 121(1-2), 1-2. NIHMSID # 28777
430. Kabanov, A.V., Levon, K. (2006) Editorial: Nanomedicine and Drug Delivery. *Curr. Pharm. Design* 12 (36), 4665-4667.
431. Ghandehari, H., Kabanov, A., Levon, K. (2006) Preface. Third International Nanomedicine and Drug Delivery Symposium theme issue, *J. Control. Release* 114, 129.
432. Maeda, H., Kabanov, A., Kataoka, K., Okano, T. (2001) Preface. *Polymer Drugs in the Clinical Stage. Advantages and Prospects.* *Adv. Exp. Med. Biol.* 519, v-vi.
433. Kataoka, K., Kabanov, A.V. (1999) Preface. *Polymeric Micelles in Biology and Pharmaceutics.* *Coll. Surf. B: Biointerfaces* 16 1-2.

434. Kabanov, A.V., Felgner, P.L., Seymour, L.W. (1998). Introduction. Self-Assembling Complexes for Gene Delivery. From Laboratory to Clinical Trial. John Wiley. Chichester, New York, Weinheim, Brisbane, Singapore, Toronto, xiii-xvii.

PATENTS:

U.S. Patents:

1. Kabanov AV, Alakhova DYu, Zhao Y, Compositions and methods for the treatment of cancer, U.S. Patent 10,022,325 B2, July 17, 2018
2. Kabanov A.V., Tong J. Protein-poly(2-oxazoline) conjugates for enhanced cellular delivery and transport across biological barriers, U.S. Patent # 9,974,866, May 22, 2018.
3. Kabanov A., Batrakova E., Mahajan V., Haney M.J., Compositions and methods for gene therapy, U.S. Patent # 9,789,205, Oct. 17, 2017
4. Bronich TK, Kabanov AV, Kim JO, Drug delivery compositions and methods, U.S. Patent 9,498,533, Nov, 22, 2016
5. Kabanov AV, Jordan R, Luxenhofer R, Polymeric delivery systems for active agents, U.S. Patent 9,402,908, Aug. 2, 2016
6. Kabanov A.V., Tong, J., Water-soluble fullerene formulations and methods of use thereof, U.S. Patent 9,233,164, January 12, 2016
7. Kabanov A.V., Yi X., Vinogradov S.V., Banks W.A., Amphiphilic polymer-protein conjugates and methods of use thereof, U.S. Patent 8,535,656 B2, September 17, 2013
8. Bronich T.K., Kabanov A.V., Cross-linked ionic core micelles, U.S. Patent # 8,415,400, April 9, 2013
9. Kabanov A.V., Yi X., Vinogradov S.V., Banks W.A. Amphiphilic polymer-protein conjugates and methods of use thereof, U.S. Patent 8,168,222, May 1, 2012
10. Batrakova E.V., Vinogradov S.V., Kabanov A.V. Amphiphilic polymer-protein conjugates and methods of use thereof, U.S. Patent 8,017,151, September 13, 2011
11. Kehrer K.P. Atlas S.M., Atlas, H., Kabanov V.A., Kabanov A., Zezin A., Rogachova V., Fibrous sheet binders, U.S. Patent RE42,110, February 8, 2011
12. Kabanov A.V., Alakhov V., Compositions and methods for increasing protein production, U.S. Patent 7,422,875, September 9, 2008
13. Bronich TK, Kabanov AV, Cross-linked ionic core micelles, U.S. Patent 7,332,527, Feb. 19, 2008
14. Kabanov AV, Lemieux P, Alakhov V, Guerin N, Compositions and methods for inducing activation of dendritic cells, U.S. Patent 7,256,180, Aug. 14, 2007
15. Kabanov AV, Eisenberg A, Kabanov VA, Composition for delivery of biological agents and methods for the preparation thereof, U.S. Patent 7,169,411, Issued Jan. 30, 2007
16. Kabanov AV, Eisenberg A, Kabanov VA, Compositions for delivery of biological agents and methods for the preparation thereof, U.S. Patent 7,056,532, Jun. 6, 2006
17. Kabanov AV, Vinogradov SV, Nanogel networks including polyion polymer fragments and biological agent compositions thereof, U.S. Patent 6,696,089, Feb. 24, 2004
18. Kabanov AV, Lemieux P, Guerin N, Alakhov V, Compositions of non-ionic block copolymers to treat autoimmune and inflammatory diseases, and to reduce graft/implantation, and methods of use thereof, U.S. Patent 6,656,459, Dec. 2, 2003
19. Kabanov AV, Alakov VY, Vinogradov S, Methods of using polynucleotide compositions, U.S. Patent 6,440,743, Aug. 27, 2002
20. Kabanov AV, Alakhov VY, Batrakova EV, Copolymer compositions for oral delivery, U.S. Patent 6,387,406, May 14, 2002

21. Lemieux PM, Kabanov AV, Alakov VY, Vinogradov SV, Polynucleotide compositions for intramuscular administration, U.S. Patent 6,359,054, March 19, 2002
22. Kabanov AV, Alakhov VY, Vinogradov SV, Polynucleotide compositions, U.S. Patent 6,353,055, March 5, 2002
23. Kabanov AV, Vinogradov SV, Nanogel networks and biological compositions thereof, U.S. Patent 6,333,051, Dec. 25, 2001
24. Kabanov AV, Vinogradov SV, Pharmaceutical compositions comprising fluorinated co-polymers, U.S. Patent 6,316,505, Nov. 13, 2001
25. Kabanov AV, Alakhov VY, Batrakova EV, Copolymer compositions for oral delivery, U.S. Patent 6,277,410, Aug. 21, 2001
26. Kabanov AV, Alakhov VY, Vinogradov SV, Polynucleotide compositions, U.S. Patent 6,221,959, April 24, 2001
27. Alakhov V, Kabanov A, Parniak M, Klinski E, Copolymer compositions for treating viral infections, U.S. Patent 6,218,438, April 17, 2001
28. Kabanov AV, Alakhov VYu, Chekhonin VP, Batrakova EV, Kabanov VA, Compositions for targeting biological agents, U.S. Patent 6,153,193, Nov. 28, 2000
29. Kabanov AV, Alakhov VYu, Peptide copolymer compositions, U.S. Patent 6,093,391, July 25, 2000
30. Kabanov AV, Alakhov VYu, Polymer compositions for chemotherapy and methods of treatment using the same, U.S. Patent 6,060,518, May 9, 2000
31. Kabanov AV, Vinogradov SV, Fluorinated copolymeric pharmaceutical adjuncts, U.S. Patent 6,054,492, April 25, 2000
32. Alakhov VYu, Kabanov AV, Sveshnikov PG, Severin ES, Biological agent compositions, U.S. Patent 5,840,319, Nov. 24, 1998
33. Alakhov VYu, Kabanov A.V, Sveshnikov PG, Severin ES, Biological agent compositions, U.S. Patent 5,817,321, Oct. 6, 1998
34. Kabanov A.V., Alakhov VY, Polymer linked biological agents, U.S. Patent 5,783,178, July 21, 1998
35. Alakhov VY, Kabanov AV, Sveshnikov PG, Severin ES, Chemotherapeutic compositions, U.S. Patent 5,698,529, Dec. 16, 1997
36. Kabanov AV, Alakhov VY, Vinogradov SV, Polynucleotide compositions, U.S. Patent 5,656,611, Aug. 12, 1997

Published US Patent Applications (excluding issued patents):

37. Liu X-M, Gendelman H.E., Kabanov A.V., Tunable multimodal nanoparticles and methods of use thereof, U.S. Patent application # 20150079007, Published March 19, 2015
38. Gendelman H.E., Kabanov A.V., Liu X.-M., Davis R.M., Riffle J., Small magnetite therapeutics and methods of use thereof, U.S. Patent application # 20150125401, Published May 7, 2015
39. Yi X., Kabanov A.V., Banks W.A., Delivery of biotherapeutics to the brain, U.S. Patent application #20150306181, Published October 29, 2015
40. Kabanov A.V., Manickam D.S., Brynskikh A.M., Nanozyme compositions and methods of synthesis and use thereof, U.S. Patent application # 20140120075, Published May 1, 2014
41. Kabanov A.V., Manickam, D.S., Compositions and methods for the treatment of lung inflammation, U.S. Patent application # 20130052154, Published February 28, 2013.
42. Kabanov A.V.; Alakhova D.Y., Zhao, Y., Compositions and methods for the treatment of cancer, U.S. Patent application #20130195964, Published August 1, 2013
43. Gendelman H.E., Kabanov A.V., Liu X.-M., Compositions and methods for the delivery of therapeutics, U.S. Patent application #20130236553, Published September 12, 2013

44. Kabanov A.V., Bronich T., Batrakova E., Gendelman H., Compositions for protein delivery and methods of use thereof, U.S. Patent application # 20100291065, Published November 18, 2010

Published International Applications and Foreign Patents (partial list):

45. Method of preparation of interferons, USSR Certificate No.: SU 1608895.
46. Method of preparation of modified form of neuroleptic - Ftelazin, USSR Certificate No.: SU 1725130.
47. Method of preparation of composition for oral administration, SU 1637808 A1 (Lasarev A.P., Beloded, T.A., Gizzatulina, R.A., Levashov. A.V., Kabanov, A.V.).
48. Method of viruses reproduction suppression, USSR Certificate No.: SU 1730144.
49. Bioactive preparation for pigs, method of its preparing, method of prophylaxis and treatment of viral disease in pigs, Russian Patent No.: RU 2058789 C1 (Lasarev A.P., Levashov. A.V., Sukharev, O.I., Gruzdev, K.N., Kabanov, A.V., Karas, O.Y., Pushko, N.P.)
50. Method of determining efficiency of binding of F3+ ions by water-soluble polymers in aqueous media, Russian Patent No.: RU 2026547 (Anufrieva, E.V., Nekrasova, T.N., Gromova, R.A., Kabanov, A.V., Krakoviak, M.G., Lushik, V.B.)
51. Composition of antineoplastic agents incorporated in micelles, International Application No.: PCT/CA1993/0020425 (Pub. No. WO/1994/008564); National patents: AT198268; AU5147193A1; CA2125500; DE69329792; DK0619730T3; ES2153387; EP619730; PT0619730T.
52. Immobilisation material and apparatus for affinity chromatography with mobile organic solvent phase or reverse micellar phase, immunoassays with this immobilization material, International Application No.: PCT/US1992/002354 (Pub. No. WO1994/009365); National patents: AT153766; DE 4111527; DE 59208557; EP 0664885 (A1); EP 0664885 (B1).
53. Polynucleotide compositions, International Application No.: PCT/US1995/013800 (Pub. No. WO1996/015778); National patents: AU014981; AU4196596; CA2205486; CN1173128; EP789564; RU2175337.
54. Polymer linked biological agents, International Application No.: PCT/US1995/015084 (Pub. No. WO/1996/016541); National patents: AU5167496.
55. Biological agent compositions, International Application No.: PCT/IB1996/000799 (Pub. No. WO1996/040055); National patents: AU6529796; AU700021; BR9609176; CA2222776; EP871432.
56. Polyether block copolymer micellar compositions for targeting biological agents, International Application No.: PCT/US1996/000801 (Pub. No. WO/1996/040056); National patents: AU6628496; CA2236946; EP839026.
57. Improvements in polymer compositions for chemotherapy and methods of treatment using the same, International Application No.: PCT/US1997/014218 (Pub. No. WO/1998/007434); National patents: AU3978497; EP939640.
58. Fluorinated copolymeric pharmaceutical adjuncts, International Application No.: PCT/US1997/016785 (Pub. No. WO/1998/0130690); National patents: AU6358898.
59. Compositions for delivery of biological agents and methods for the preparation thereof, International Application No.: PCT/US1998/012139 (Pub. No. WO/1998/056334); National patents: EP1005324.
60. Compositions for delivery of biological agents and methods for the preparation thereof, International Application No.: PCT/US1998/012138 (Pub. No. WO/1998/056348).
61. Methods of identifying biological agents compositions, International Application No.: PCT/US1998/016300 (Pub. No. WO/1999/008112); National patents: EP1005651.
62. Copolymer compositions for oral delivery, International Application No.: PCT/US1999/002538 (Pub. No. WO/1999/039731); National patents: AU2496199, EP1053010.

63. Novel peptide copolymer compositions, International Application No.: PCT/US1999/004218 (Pub. No. [WO/1999/043343](#)); National patents: [AU2792799](#), [EP1056469](#).
64. Polynucleotide compositions, International Application No.: PCT/US1999/004218 (Pub. No. [WO/1999/00605500](#)); National patents: [AU8680698](#), [EP1003527](#).
65. Nanogel networks and biological compositions thereof, International Application No.: PCT/US1999/019690 (Pub. No. [WO/2000/013677](#)); National patents: [AU5789699](#).
66. Copolymer compositions for treating viral infections, International Application No.: PCT/US1999/027299 (Pub. No. [WO/2000/028994](#)); National patents: [AU017333](#)
67. Polynucleotide compositions for intramuscular and intradermal administration, International Application No.: PCT/US2000/000309 (Pub. No. [WO/2000/047186](#)); National patents: [AU029608](#).
68. Compositions and methods for inducing activation of dendritic cells, International Application No.: PCT/US2001/013921 (Pub. No. [WO/2001/083698](#)).
69. Treatment of autoimmune, proliferative and inflammatory diseases with compositions of nonionic copolymers, International Application No.: PCT/US2001/015265 (Pub. No. [WO/2001/087234](#)).
70. Nanogel networks including polyion polymer fragments and biological agent compositions thereof, International Application No.: PCT/US2002/036988 (Pub. No. [WO/2003/082348](#))
71. Pesticide delivery system, International Application No.: PCT/US2007/000552 (Pub. No. [WO/2007/081961](#)).
72. Pesticide delivery system, International Application No.: PCT/US2007/000559 (Pub. No. [WO/2007/081965](#)).
73. Pesticidal aggregates, International Application No.: PCT/US2007/087398 (Pub. No. [WO/2008/076807](#)).
74. Compositions for protein delivery and methods of use thereof, International Application No.: PCT/US2008/063213 (Pub. No. [WO/2008/141155](#)).
75. Polymeric delivery systems for active agents, International Application No.: PCT/EP2009/004655 (Pub. No. [WO/2009/156180](#)).
76. Protein-poly(2-oxazoline) conjugates for enhanced cellular delivery and transport across biological barriers, International Application No.: PCT/US2011/031542 (Pub. No. [WO/2011/127256](#)).
77. Compositions and methods for the treatment of cancer, International Application No. PCT/US2011/050518 (Pub. No. [WO2012/031293](#)).
78. Compositions and methods for the delivery of therapeutics, International Application No.: PCT/US2011/058929 (Pub. No. [WO/2012/061480](#)).
79. Water-soluble fullerene formulations and methods of use thereof, International Application No.: PCT/US2012/021234 (Pub. No. [WO/2012/097245](#)).
80. Drug delivery compositions and methods, International Application No.: PCT/US2012/032128 (Pub. No. [WO/2012/138730](#)).
81. Nanozyme compositions and methods of synthesis and use thereof, International Application No.: PCT/US2012/039325 (Pub. No. [WO/2012/162490](#)). Granted in Europe, Russia and Australia.
82. Method of decreasing intra-ocular pressure. Russian Patent Application 2011147704. Patent approved 07.08.2012.
83. Nanosized enzyme biocatalyst for detoxification of phosphororganic compounds *in vivo*. Russian Patent Application 2012139201.
84. Pharmaceutical composition for local administration during inflammatory diseases of the eye and methods of its use. Russian Patent Application 2012130852.
85. A hydrolase of peptidoglycane, expression vector containing DNA fragment encoding a hydrolase of peptidoglycane, producing bacteria and method of microbiological synthesis of hydrolase of peptidoglycane, Russian Patent Application 2012152156.

86. A method for imaging of gliomas using magnetic nanoparticles of iron oxide conjugated to the antibodies to the vascular endothelium growth factor using MRI in SWI mode. Russian Patent Application 2012153952.
87. A method of control of biochemical reactions. Russian Patent Application 2012155425.
88. Polymeric delivery systems for active agents, Russian Patent # 2523714; Japan Patent # 5671457; China Patent # ZL 2009 80123536.X (Kabanov A.V., Jordan; R. Luxenhofer; R.)

ORAL PRESENTATIONS:**Lectures at Gordon Research Conferences (GRC)**

1. Nanoformulations for Immuno-Chemotherapy of Cancer, GRC Biotherapeutics and Vaccines Development, Ventura, CA, March 31, 2022.
2. Super-high-capacity polymeric micelles, GRC Cancer Nanotechnology, West Dover, VT, June 25, 2019. Chair R. Satchi-Fainaro.
3. Nanozymes for protein delivery to the brain, GRC Barriers of the CNS. Bridging Barriers to Treat CNS Disease, Colby-Sawyer College, New London, NH, June 20, 2012. Chair Q. Smith.
4. Polymer micelles from bench to bedside, GRC Drug Carriers in Biology and Medicine, Waterville Valley Resort, Waterville Valley, NH, Aug. 16, 2010. Chairs Patrick S. Stayton & Philip S. Low.
5. Polyion complexation and delivery, GRC Macromolecular Materials, Ventura, CA, Jan. 12, 2009. Chair Darrin J. Pochan.
6. Charge-driven self-assembly of nanoformulations, GRC Drug Carriers in Biology and Medicine, Big Sky Resort, Big Sky, MT, Aug. 21, 2006. Chairs Thomas Kissel & Alexander V. Kabanov.
7. Polymer genomics, GRC Drug Carriers in Biology and Medicine, Big Sky Resort, Big Sky, MT, Sep. 6, 2004. Chairs Peter D. Senter & Jindrich Kopecek.
8. Pluronics as CNS drug delivery systems, GRC Barriers of the CNS, Tilton School, Tilton, NH, June 27, 2002. Chair David J. Begley.
9. Block ionomer complexes for controlled drug delivery, GRC Ion Containing Polymers, Salve Regina University, Newport, RA, June 23, 1999. Chairs Robert K. Prud'Homme & William M. Risen.
10. Nucleotide-polymer complexes, GRC Drug Carriers in Biology and Medicine, Ventura, CA, Feb. 26, 1996. Chairs Randall J. Mersny & Theresa M. Allen

Plenary and Invited Lectures at other National and International Meetings:

11. High-capacity polymeric micelles for chemo/immunotherapy of cancer (plenary), 2022 Annual Meeting & International Conference of the KSPST, Seoul, South Korea, Dec. 1, 2022.
12. Convergence of polymers and bioactive molecules in the context of nanomedicine (CRS Founders award), Controlled Release Society 2022 Meeting and Exposition, Montreal, Canada, Jul. 12, 2022
13. Morphology, partitioning and pharmacological performance in polymeric micelles, ACS 2022 Spring Meeting: Synthetic Amphiphiles and Formulations for the Delivery of Drugs, Nucleic Acids and Proteins, San Diego, CA, March 23, 2022.
14. Morphology, partitioning and pharmacological performance in polymeric micelles, 18th International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, UT, February 23-24, 2022
15. Morphology, partitioning and pharmacological performance in polymeric micelles, 1st Advances in Polymeric Micelles, University of Coimbra, remote, Jan. 24, 2022
16. Nanomedicine today and tomorrow, Congress of Young Scientists, Sochi, Russia, Dec. 10, 2021.
17. Toward translation of nanoformulated paclitaxel-platinum combination, 2021 Annual Principal Investigators Meeting, NCI Alliance for Nanotechnology in Cancer, remote, Oct. 18, 2021.
18. Hyperloaded polymeric micelles for chemo and immunotherapy, 12TH PBP World Meeting (World Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology), remote, May 12, 2021
19. On the role of macrophages in gene transfer, 2020 RASA Global Meeting, remote, Dec. 6, 2020.
20. Super-high-capacity polymeric micelles for cancer therapeutics ...and Few words about Covid-19 therapeutics, Virtual European Polymer Conference, remote, Sep 18, 2020.

21. Ultra-high capacity nanoformulations of injectable and aerosolized Remdesivir, PharmAlliance, remote, Sep. 17, 2020.
22. Super-high-capacity polymeric micelles for cancer therapeutics ...and Few words about Covid-19 therapeutics, 11th International Congress "Biomaterials and Nano-biomaterials: Recent Advances Safety – Toxicology, remote, Jul 22, 2020.
23. Unmet drug delivery needs in antiviral therapy of COVID-19, 2020 CRS Virtual Annual Meeting, remote, Jun 29 - Jul 2, 2020.
24. The problem of drug delivery in the therapy of coronavirus infection COVID-19, "Coronavirus - a Global Health Challenge", Assembly of the medical and biological sciences section of the Russian Academy of Sciences May 6, 2020.
25. Super-high-capacity polymeric micelles for cancer therapeutics, International Symposium on Biomedical Materials for Drug/Gene Delivery, In honor of 80th Birthday of Prof. Jindřich Kopeček, Salt Lake City, Feb. 7, 2020.
26. Super-high-capacity polymeric micelles for cancer therapeutics, 2019 Annual Principal Investigators Meeting, NCI Alliance for Nanotechnology in Cancer, Bethesda, MD, Sep 26, 2019.
27. Super-high-capacity polymeric micelles for cancer therapeutics, the 17th Nanomedicine and Drug Delivery Symposium (NanoDDS), Boston, MA, Sep 22, 2019.
28. Super-high-capacity polymeric micelles for cancer therapeutics, the International Conference "Catalysis and Organic Synthesis" (ICCOS-2019), Moscow, Russia, Sep 19, 2019.
29. Super-high-capacity polymeric micelles for cancer therapeutics, 258th ACS National Meeting, San Diego, CA, Aug 28, 2019.
30. Exosomes for CNS therapeutics, 2019 Controlled Release Society Annual Meeting, Valencia, Spain, July 23, 2019.
31. Why there is no "Pill for Cancer" and what shall we do about it? Science of the Future, Sochi, Russia, May 16, 2019.
32. Hyperloaded poly(2-oxazoline) micelles as drug carriers for cancer therapy, Riyadh, Saudi Arabia. Nov 08, 2018.
33. Ultra-high-capacity polymeric micelles as drug carriers for cancer therapy, 2018 Annual Principal Investigators Meeting, NCI Alliance for Nanotechnology in Cancer, Bethesda, MD, Oct 09, 2018.
34. Ultra-high-capacity polymeric micelles as drug carriers for cancer therapy, ChemTrends 2018, Moscow, Russia, Sep 27, 2018.
35. Polymeric micelles, polyion complexes, cells and exosomes for drug delivery, International Conference on Advanced Structural and Functional Materials, Krakow, Poland, Aug 22, 2018.
36. Biomedical applications of polymeric micelles and polyion complexes, 253rd National Meeting of the American Chemical Society, New Orleans, LA Mar 18, 2018
37. Polymeric micelles at clinical stage, 2019 Controlled Release Society Annual Meeting, New York, NY, Jul 27, 2018
38. Polymeric micelles and polyion complexes as foundation of current nanomedicine, 2nd All-Armenian Scientific Conference, Yerevan, Armenia, Nov 11, 2017
39. Polymeric micelles - A clinical nanomedicine technology, 2nd International conference, "Biotechnology of New Materials – Environment – Quality of Life", Krasnoyarsk, Russia, Sep 28, 2017
40. Polymeric micelles and polyion complexes as foundation of current nanomedicine, 8th International Conference "Biomaterials and Nanobiomaterials: Recent Advances, Safety-Toxicology and Ecology Issues" Including Russian-Hellenic Workshop and School of Young Scientists, Crete, Greece, May 08, 2017.

41. Polymeric micelles and polyion complexes as foundation of current nanomedicine, 3rd International Conference of Biomaterials Science, Tokyo, Japan, Nov 28, 2016.
42. Nanomedicine and targeted drug delivery, Modern Problems of Polymer Science, Tashkent, Uzbekistan, Nov 14, 2016.
43. Nanomedicine and targeted drug delivery, 5th Congress of Biochemists of Russia, Sochi, Russia, Oct 8, 2016.
44. Nanomedicines for CNS Delivery of Polypeptides, 13th Nanomedicine and Drug delivery Symposium (NanoDDS), Baltimore, MD, Sep 17, 2016.
45. Very High-Capacity Polymeric Micelles for Drug Delivery, Israel Chapter of Controlled Release Society, Maalot Tarsicha, Western Galilee, Israel, Sep 15, 2016.
46. Biomedical applications of nano-sized polyion complexes, 80th Prague Meeting on Macromolecules – Self-assembly in the world of polymers, Prague, Czech Republic, Jul 12, 2016.
47. Block Ionomer Complexes for Delivery of Therapeutic Peptides and More, 11th International Symposium on Polyelectrolytes (ISP), Moscow, Russia, June 28, 2016.
48. High-Capacity Polymeric Micelles for Drug Delivery, 7th International Conference “Nanoparticles, Nanostructured Coatings and Microcontainers: Technology, Properties, Applications”, Keynote Speaker, Tomsk, Russia, May 12, 2016.
49. Polymeric Micelles for Drug Delivery, 2nd International Young Scientists School, Tomsk, Russia, May 9, 2016.
50. Nanomedicines for CNS Delivery of Polypeptides, NGF 2016 Meeting, Society for Neuroscience, Monterey, CA, April 19, 2016.
51. Polymeric Micelles for Drug Delivery – A Transformative Technology at Clinical Stage, Nanotechnology for healthcare, A Winthrop Rockefeller Conference, Dec. 2-4, 2015.
52. Polymeric Micelles for Drug Delivery – A Transformative Technology at Clinical Stage, 10th East Asian Symposium on Polymers for Advanced Technology, Awaji, Japan, July 28, 2015.
53. Polymeric Micelles for Drug Delivery – A Transformative Technology at Clinical Stage, The ASME 2015 4th Global Congress on NanoEngineering for Medicine and Biology, Minneapolis, MN, April 20, 2015.
54. Polymeric Micelles for Drug Delivery – A Transformative Technology at Clinical Stage, Society for Thermal Medicine Annual Meeting, Orlando, FL, April 17, 2015.
55. Polymeric Micelles for Drug Delivery – A Transformative Technology at Clinical Stage, 2015 Materials Research Society Spring Meeting, San Francisco, CA, April 8, 2015.
56. Polymeric Micelles for Drug Delivery – A Transformative Technology at Clinical Stage, 2nd Nanomedicine for Imaging and Treatment Conference, Los Angeles, CA, March 13, 2015.
57. Polymeric Micelles for Drug Delivery, The 1st International Symposium on Translational Nanomedicine, Guangzhou, China, Jan. 8, 2015.
58. Polymeric Micelles – A transformative technology at the clinical stage, Annual Conference of the Russian-American Scientists Association (RASA), Boston, MA, Nov. 7, 2014.
59. Polymeric Micelles – A transformative technology at the clinical stage, Nanomedicine Workshop, Celebrating the 10th Anniversary of Center for Drug Delivery and Nanomedicine, UNMC, Omaha, NE, Nov. 7, 2014.
60. Polymeric micelles for drug delivery, First International Scientific Conference "Science of the Future", St. Petersburg, Russia, Sep. 18 2014
61. Polymeric micelles for drug delivery, **Plenary Lecture**, XII International Conference on Nanostructured Materials (NANO 2014), Moscow, Russia, Jun. 18, 2014

62. Polymeric micelles for drug delivery, Molecular Order and Mobility in Polymeric Systems, St. Petersburg, Russia, Jun. 03, 2104.
63. Polymeric micelles for drug delivery, International Biomedical Conference Towards of the Future, Skolkovo Innovation Center, Moscow, Russia, May 27, 2014.
64. Agile delivery of protein therapeutics to CNS, 10th International Symposium on Polymer Therapeutics: From Laboratory to Clinical Practice, Valencia, Spain, May 19, 2014
65. Block copolymers in drug delivery and nanomedicine. **Plenary Lecture**, 9th World Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology, Lisbon, Portugal Apr. 1, 2014
66. A very high-capacity polymeric micelle drug delivery system. 4th Annual Scientific Conference, American Society for Nanomedicine (ASNM) Shady Grove Conference Center, Rockville, MD, Mar. 28, 2014.
67. Very high-capacity polymeric micelles for drug delivery, Polymers in Medicine and Biology 2013, Sonoma Valley, CA, Oct. 11, 2013.
68. A very high-capacity polymeric micelles for drug delivery, 2013 Annual Principal Investigators Meeting, NCI Alliance for Nanotechnology in Cancer, Bethesda, MD, Sep. 19, 2013.
69. Polymeric micelles for drug delivery: From idea to clinics, Nanotechnologies in Cancer Diagnosis, Therapy, and Prevention. The New York Academy of Sciences, New York, NY, June. 12, 2013.
70. Polymeric Micelles for Drug Delivery – From Idea to Clinics, 10th International Symposium on Frontiers in Biomedical Polymers, Vancouver, Canada, June. 3, 2013.
71. Nanomedicine – Time to Collect Stones. From science fiction to clinical practice, 2nd International Conference on Biomaterials Science (ICBS2013), Tsukuba, Japan, Mar. 20, 2013.
72. Nanomedicine – time to collect stones. From science fiction to clinical practice, Mendeleev – 2013, Sankt-Petersburg, Russia, Feb. 2013.
73. Polymer micelles and polyion complexes: state of the art and future of drug delivery, Tenth International Nanomedicine and Drug Delivery Symposium (NanoDDS'12), Atlantic City, NJ, Dec. 6, 2012.
74. The potential of doubly amphiphilic poly(2-oxazolines) to solubilize extremely hydrophobic drugs, NCI Alliance for Nanotechnology in Cancer, Annual Principal's Investigators Meeting, Houston, TX, Nov. 15, 2012.
75. Polymeric micelles and polyion complexes for drug delivery: When colloids become nanomedicines, Colloids and Nanomedicines 2012, Amsterdam, Netherlands, July 16, 2012.
76. Nanomedicine and drug delivery, 2012 IDeA Symposium, Washington, DC, June 27, 2012.
77. Nanozymes as potential bioscavengers for prevention and reparation of damage caused by OP agents, 11th International Meeting on Cholinesterases, Kazan, Russia, June 7, 2012.
78. Polymeric micelles and polyion complexes for drug delivery, 13th Dresden Polymer Discussion and 8th Max Bergmann Symposium "Molecular bioengineering meets polymer science", Meissen, Germany, April 2, 2012.
79. Nanomedicines for polymer delivery to the brain, The 18th Annual Blood-Brain Barrier Consortium Meeting "Novel Approaches for Translational Blood-Brain Barrier Research", Skamania Lodge, Stevenson, WA, March 23, 2012.
80. Polymeric materials for Nanomedicine, 9th International Conference and Workshop on Biological Barriers – *in vitro* and *in silico* Tools for Drug Delivery and Nanosafety Research, Saarland University, Saarbrücken, Germany, March 7, 2012.
81. Nanomedicines for polymer delivery to the brain, Global COE Satellite Symposium on Nanobioscience, Nanobiotechnology and Nanomedicine, Ito Campus, Kyushu University, Fukuoka, Japan, Nov. 28, 2011.
82. Latest advances in block copolymers for therapeutic use, **Plenary Lecture**, The 2011 Global COE International Symposium on Future Molecular Systems, Fukuoka, Japan, Nov. 26.

83. Polymer materials for medicine, Scientific session of the Division of Chemistry and Materials Science, Russian Academy of Sciences, Moscow, Russia, Nov. 7, 2011.
84. Polymeric micelles from bench to the bedside, NanoUtah 2011, Salt-Lake City, UT, Oct. 14, 2011.
85. Polymeric micelles for nanomedicine: From laboratory to clinics, **Plenary Lecture**, XIX Mendeleev Congress on General and Applied Chemistry, Volgograd, Russia, Sept. 28, 2011.
86. Nanomedicine: Crossing biological barriers for drug delivery, 2nd International School - Nano2011: Nanomaterials and Nanotechnologies in Living Systems. Safety and Nanomedicine, Moscow Region, Russia, Sept. 19, 2011.
87. Polymeric micelles from bench to the bedside, 1st All-Russian symposium on surfactants "From Colloidal Systems to Nanochemistry", Kazan, Russia, June 29, 2011.
88. Polymeric micelles from bench to the bedside, 3rd European Science Foundation Summer School Nanomedicine 2011, Lutherstadt Wittenberg, Germany, June 23, 2011.
89. Polymeric micelles from bench to the bedside, Triggered Nanoparticles: 6th Annual Cancer Nanobiology Think Tank, CCR Nanobiology Program. NCI-Frederick Center for Cancer Research Nanobiology, Frederick, MD, May 17, 2011.
90. Biomedical polymers for delivery of polypeptides to the brain, 9th International Symposium on Frontiers in Biomedical Polymers (FBPS 2011), Madeira, Portugal, May 9, 2011.
91. Polymeric nanomedicines for therapeutic applications, XVIII Regional Kargin readings, Tver, Russia, March 25, 2011.
92. Novel nanomedicine approaches for protein delivery to the brain, 2011 Nanomedicine and Drug Delivery Research Conference For Scientific and Healthcare Professionals, Cedars-Sinai Medical Center, Los Angeles, CA, March 5, 2011.
93. Polymeric micelles: From bench to the bedside, Pacifichem 2010. The International chemical Congress of the Pacific Basin Societies, Honolulu, Hawaii, USA, Dec. 18, 2010
94. Polymer Genomics... 10 years on, Pacifichem 2010. The International chemical Congress of the Pacific Basin Societies, Honolulu, Hawaii, USA, Dec. 16, 2010.
95. Polymer nanomaterials for therapeutic drug delivery, Targeted Drug Delivery, Food and Drug Administration, Washington, DC, Dec. 6, 2010.
96. New nanoconstructs for delivery of polypeptides to the brain, III Nanotechnology International Forum, Rusnanotech 2010, Nov. 1, 2010.
97. Polymer complexes for drug delivery, XiangShan Science Conference on Functional Supramolecular Systems, Beijing, China, Oct. 27, 2010.
98. Polymer nanomaterials for therapeutic drug delivery, 6th International Conference on the Thin Film and Ocular Surface: Basic Science and Clinical Relevance, Florence, Sep. 25, 2010.
99. Polymeric micelles from bench to bedside, **Plenary Lecture**, 24th Conference of the European Colloid and Interface Society, Prague, Czech Republic, Sep. 6, 2010.
100. Polymeric micelles from bench to bedside, 1st International Workshop on Nanomedicine, European Medicines Agency, London, Sep. 3, 2010.
101. Beyond PEGylation – protein modification with block copolymers for CNS delivery, 37th Annual Meeting of the Controlled Release Society, Portland, OR, July 13, 2010.
102. Pluronic block copolymers – beyond polymeric micelles, Nanomedicines Roundtable, 37th Annual Meeting of the Controlled Release Society, Portland, OR, July 11, 2010.
103. Polymer nanomaterials for drug delivery, Nanomedicine: from Materials Design to Clinical Applications, Workshop 37th Annual Meeting of the Controlled Release Society, Portland, OR, July 10, 2010.

104. Polymeric micelles from bench to bedside, Spanish-Portuguese Local Chapter of the Controlled Release Society, Valencia, Spain, May 28, 2010.
105. Polymer genomics – 10 years on..., **Plenary Lecture**, 8th International Symposium on Polymer Therapeutics: From Laboratory to Clinical Practice, Valencia, Spain, May 25, 2010.
106. Nanomedicines for polypeptide delivery to CNS, Society on Neuroimmune Pharmacology (SNIP) Symposia, Manhattan Beach, CA, Apr. 15, 2010.
107. Polymeric micelles from bench to bedside, Symposium on Biomedical Polymers for Drug Delivery, In honor of 70th Birthday of Jindřich Kopeček, Salt Lake City, UT,
108. Polymers: From plastics to innovative drug delivery systems, ChinaNANO 2009: International Conference on Nanoscience & Technology, Beijing, China, Sep. 2, 2009.
109. Polymer based drug and gene delivery, XXIV Meeting of the Groupe Thematique de Recherche sur la Vectorisation, Paris, France, Dec. 8, 2009.
110. Polymer micelles: from bench to bedside, 2009 American Society for Nanomedicine (ASNM) Conference, Bolger Center, MD, Oct. 23, 2009.
111. Polymer micelles: from bench to bedside, 6th International Key Symposium Nanomedicine, The Journal of Internal Medicine and The Royal Swedish Academy of Sciences, Grand Hôtel Saltsjöbaden, Stockholm, Sweden, Sep. 10, 2009.
112. Polymer nanomaterials for CNS drug delivery, 34th FEBS Congress, Prague, Czech Republic, July 7, 2009.
113. Polymer micelles: from bench to bedside, 1st International Summer School - Nano2009. Nanomaterials and Nanotechnologies in Living Systems. Moscow Region, Russia, June 30, 2009.
114. Polymers: from plastics to innovative drug delivery systems, Nanomedicine 2009 – 2nd European Summer School in Nanomedicine, Quinta Da Marinha Hotel, Lisbon, Portugal, June 13, 2009.
115. Polymer micelles: from bench to bedside, 8th International Symposium on Frontiers in Biomedical Polymers, Mishima, Japan, May 22, 2009.
116. Polymer micelles: from bench to bedside, RUSNANOTECH Nanotechnology International Forum, Moscow, Russia, Dec. 4, 2008.
117. Polymer micelles: from bench to bedside, 1st Joint US-China Symposium on Nanobiology and Nanomedicine, The 331st Xiangshan Science Conference, Fragrant Hill, Beijing, China, Oct. 23, 2008.
118. Polymer micelles for drug delivery - from bench to bedside, Materials Medicine Mini-symposium, Virginia Tech, Blacksburg, VA, Nov. 21, 2008.
119. Structure and dynamics of block ionomer complexes, 4th Kargin Conference “Polymer science 21-st century”, Moscow, Russia, Jan. 30, 2007.
120. Black Swan and Nanomedicine, ESF-UB Conference in Biomedicine “Nanomedicine 2008”, Hotel Eden Rock, Saint Feilu de Guixols, Spain, Sep. 22, 2008.
121. Block ionomer complexes for nanomedicine and drug delivery, The 42nd World Polymer Congress, MACRO 2008, Taipei, Taiwan, July 2, 2008.
122. Translational and clinical nanomedicine, USA - Japan Mini-Symposium on “Materials Medicine and Nanopharmacology”, University of Nebraska Medical Center, Omaha, NE, March 25, 2008.
123. Polymer materials for nanomedicine, Nanomedicine symposium, Industry of Health Forum, Russian Academy of Medical Sciences, Moscow, Russia, Feb. 14, 2008.
124. Block ionomer complexes for nanomedicine and drug delivery, “Self-assembled structures of amphiphilic copolymers and biopolymers” Joint workshop of the Marie Curie Research and Training Networks POLYAMPHI and BIOPOLYSURF and the ESF EUROCORES project BIOSONS, Biarritz, France, Feb. 12, 2008.

125. Nanomaterials for drug delivery to the brain, US-Russian Workshop "Towards health in 21st century: nanomedicine and self-organization of biological systems", Moscow, Moscow State University, Russia, Dec. 10, 2007.
126. Nanomaterials for CNS drug delivery, Fifth International Nanomedicine and Drug Delivery Symposium (NanoDDS'07), Boston, MA, Nov. 3, 2007.
127. Polymer nanomaterials for drug delivery, 2nd International Symposium on Atomic Technology, Awaji, Japan, Oct. 1, 2007.
128. Polymer genomics: pharmacology and toxicology of nanomaterials for drug delivery, 16th International Symposium on Microencapsulation, Lexington, KY, Sep. 10, 2007.
129. SP1049C: Clinical product development, 34th Annual Meeting of the Controlled Release Society, Long Beach, CA, July 11, 2007 (with V.Y. Alakhov).
130. Polymer nanomaterials for CNS drug delivery, 7th International Symposium on Frontiers in Biomedical Polymers, Ghent, Belgium, June 26, 2007.
131. Polymer genomics, Polymers in medicine and biology, Sonoma Valley, CA, June 18, 2007.
132. CNS drug delivery. International Symposium on Drug Research and Development "From Chemistry to Medicine" (DRD 2007). Antalya, Turkey, May 20, 2007.
133. Therapy of MDR cancers using pluronic: molecular targets and future prospects, International Symposium on Polymer Therapeutics, Berlin, Germany, Feb. 19, 2007.
134. CNS drug delivery, Symposium on "Drug Delivery and Translational Research", Brooklyn, NY, Dec. 4, 2006.
135. Charge-driven self-assembly of nanomedicines, 2006 AAPS Annual Meeting, San Antonio, TX, Oct. 31, 2006.
136. Nanomedicine: New frontiers in pharmacology and therapeutics, North American Congress of Clinical Toxicology 2006, San Francisco, CA, Oct. 6, 2006.
137. Structure and dynamics of block ionomer complexes, International Symposium on Polyelectrolytes, Dresden, Germany, Sep. 6, 2006.
138. Pharmacology and genomics of polymers and nanomaterials, 33rd Annual Meeting of the Controlled Release Society, Vienna, Austria, July 26, 2006.
139. Get Up; Get Educated - Nanogel Networks and Their Application in Drug Delivery, 33rd Annual Meeting of the Controlled Release Society, Vienna, Austria, July 24, 2006.
140. Polymer nanomaterials for diagnostics and therapeutics, 33rd Annual Meeting of the Controlled Release Society, Young Scientists Workshop, Vienna, Austria, July 22, 2006.
141. Sensitization of MDR cancers by Pluronic, 2005 AAPS Annual Meeting, Nashville, TN, Nov. 9, 2005.
142. Nanomedicine: The United States Perspective, Third International Nanomedicine and Drug Delivery Symposium, Baltimore, MD, Sep. 27, 2005.
143. Polymer nanomaterials for drug delivery, 1st Annual Meeting of American Academy of Nanomedicine, Baltimore, MD, Aug. 14, 2005.
144. Polymer genomics: a shift in gene and drug delivery paradigms, Advances in Science for Drug Discovery, Moscow-Kiji-Valaam-St. Petersburg, July 13, 2005.
145. Charge driven self-assembly of nanomaterials, European Polymer Congress, Moscow, June 27, 2005.
146. Polymer science to life science, **Plenary Lecture** (with Prof. V.A Kabanov), European Polymer Congress, Moscow, Russia, June 26, 2005.
147. Drug delivery and nanomedicine, AAPS National Biotechnology Conference, San Francisco, CA, June 8, 2005.

148. Transcriptional activation of gene expression by pluronic, 8th Annual Meeting of American Society for Gene Therapy, Saint-Louis, MO, June 3, 2005.
149. Polymer genomics: a shift in gene and drug delivery paradigms, The 5th Anniversary International Symposium for Gene Design and Delivery, Tokyo, Japan, May 20, 2005.
150. Polymer genomics, Nebraska Research Expo, MINI TRACt Session on Bioinformatics, Omaha, NE, Apr. 20, 2005.
151. Polymer genomics: shifting the drug and gene delivery paradigm, 7th New Jersey Symposium on Biomaterials Science, New Brunswick NJ, Oct. 22, 2004.
152. Charge driven self-assembly of nanoparticles, Biomedical Application of Nanostructures, Lincoln, NE, Oct. 8, 2004.
153. Effect of pluronic block copolymers on gene expression, 228th ACS Meeting, Philadelphia, PA, Aug. 25, 2004.
154. Polymer genomics: A paradigm shift in drug delivery, 228th ACS Meeting, Philadelphia, PA, Aug. 25, 2004.
155. Soluble nanoparticles from block ionomer micelles and oppositely charged polyions, 228th ACS Meeting, Philadelphia, PA, Aug. 24, 2004.
156. Polymer genomics: shifting the drug and gene delivery paradigm, Second Meeting on Nanomedicine and Drug Delivery, Brooklyn, NY Aug. 19, 2004.
157. Polymer genomics: shifting the drug and gene delivery paradigm, 2004 FASEB Summer Research Conferences, Molecular Biophysics of Cellular Membranes, Tucson, AZ, June 24, 2004
158. Polymer genomics: shifting the drug and gene delivery paradigm, "Pharmaceutical Perspectives of Nucleic Acid Based Therapeutics", Controlled Release Society, 31st Annual Meeting, Honolulu, HI, June 12, 2004.
159. Charge driven nanoparticle self-assembly, A William I. Fine Theoretical Physics Institute Workshop Electrostatic Interactions and Biophysics. Minneapolis, MN, May 1, 2004.
160. Polymer genomics: shifting the drug and gene delivery paradigm, 8th European Symposium on Controlled Drug Delivery, Noordwijk aan Zee, Netherlands, Apr. 9th, 2004.
161. Polymer Genomics, 3rd Russian Kargin Conference "Polymers - 2004", Moscow, Russia, Jan. 28th, 2004.
162. Polymer genomics for polymer therapeutics, 6th International Symposium on polymer therapeutics, Cardiff, UK, Jan. 8th, 2004.
163. Novel strategies for delivery of small molecules and macromolecules to the brain, 2003 AAPS Annual Meeting, Salt Lake City, UT, Oct. 29, 2003.
164. Novel strategies for drug and macromolecule delivery to the brain, 5th International Symposium on Frontiers in Biomedical Polymers, Ischia, Italy, Sep. 10th, 2003.
165. Pluronic block copolymers enhance local transgene expression in skeletal muscle and solid tumor, 30th Annual Meeting of the Controlled Release Society, Glasgow, UK, July 20, 2003.
166. Polymers for gene delivery – Where we stand? Where we go? 36th Annual Higuchi Research Seminar, Lawrence, KS, May 6, 2003.
167. Nanogels: novel materials for drug delivery of macromolecules to the brain, US-Japan Minisymposium on Nanomedicine and Drug Delivery, Omaha, NE, Jan. 6, 2003.
168. Pluronic block copolymers as novel polymer therapeutics in drug and gene delivery: fundamentals and clinical applications, 2002 AAPS Annual Meeting, Toronto, Ontario, Canada, Nov. 11, 2002.
169. Pluronic block copolymers for overcoming drug resistance in cancer, 2nd International Symposium on Tumor Targeted Delivery Systems, National Cancer institute, Rockville, MD, Sep. 23, 2002.
170. Polycations for gene delivery: Problems and solutions, 5th International Biorelated Polymers Symposium, 224th ACS National Meeting, Boston, MA, Aug. 21, 2002.

171. Nanogels: novel materials for drug delivery of macromolecules to the brain, 29th Annual Meeting of the Controlled Release Society, Seoul, Korea, July 25, 2002.
172. Nanogel networks for macromolecular delivery across BBB, 35th Annual Higuchi Research Seminar, Lawrence, KS, May 7, 2002.
173. Polycations for systemic gene delivery, FASEB Meeting 2002, New Orleans, LA, Apr. 23, 2002.
174. Pluronic block copolymers as novel polymer therapeutics for drug and gene delivery, 223rd ACS National Meeting, Orlando, FL, Apr. 9, 2002.
175. Current challenges in polymer therapeutics (general discussion), International Symposium on Polymer Therapeutics, Nara, Japan, July 14, 2001.
176. What hinders and how to achieve effective gene therapy with polycations? 4th Annual Meeting, American Society of Gene Therapy, Seattle, WA, June 1, 2001.
177. What hinders and how to achieve effective gene therapy with polycations? 4th International Symposium on Frontiers in biomedical Polymers, Williamsburg, VA, May 18, 2001.
178. Pluronic block copolymers for drug delivery, 2001 AAPS Annual Meeting, Denver, CO, Oct. 25, 2001.
179. Latest in Pluronic block copolymers for drug delivery to the brain, 34rd Annual Higuchi Research Seminar, Lake of the Ozarks, MO, March 13, 2001.
180. Self-assembly of block ionomers and surfactants of opposite charge, International Conference on Amphiphilic Polymers and Gels, Sintra, Portugal, Jan. 10, 2001.
181. Selective energy depletion and sensitization of MDR cells by Pluronic block copolymers, 4th International Biorelated Polymers Symposium, 220th ACS National Meeting, Washington, DC, Aug. 21, 2000.
182. Selective energy depletion and sensitization of multiple drug resistant cells by Pluronic block copolymers, 40th IUPAC Microsimposium Polymers in Medicine, in honor of 60th birthday of Prof. Jindřich Kopeček, Prague, Czech Republic, July 18, 2000.
183. Block ionomer complexes, 2nd All-Russian Kargin Symposium, Chernogolovka, Russia, May 29, 2000.
184. Novel nanocomposite materials based on block ionomer complexes, 219th ACS National Meeting, San Francisco, CA, March 30, 2000.
185. Novel polymers for drug delivery, 219th ACS National Meeting, San Francisco, CA, March 30, 2000.
186. Recognition of DNA topology in reactions between plasmid DNA and cationic copolymers, 219th ACS National Meeting, San Francisco, CA, March 29, 2000.
187. Selective energy depletion and sensitization of MDR cells by Pluronic block copolymers, 33rd Annual Higuchi Research Seminar, Lake of the Ozarks, MO, March 13, 2000.
188. Novel polymers for drug delivery, International Symposium "Biomedical Polymers for 21st Century – Molecular Design and dynamics", on the occasion of Prof. V.A. Kabanov's 65th birthday, Sapporo, Japan, Nov. 4, 1999.
189. Block ionomer complexes, 3rd International Conference "Advanced Polymers via Macromolecular Engineering" Colonial Williamsburg, VA, Aug. 2, 1999.
190. DNA/Polycation complexes for gene delivery, 3rd International Symposium on Frontiers in Biomedical Polymers Including Polymer Therapeutics, Lake Biwa, Shiga, Japan, May 25, 1999.
191. Self-assembly and activity of polyplexes, Conference "Structure & Design of Synthetic Gene Carriers", UCSF, San Francisco, CA, Feb. 5, 1999.
192. Taking polycation gene delivery systems from in vitro to in vivo, 1998 AAPS Annual Meeting, San Francisco, CA, Nov. 18, 1998.
193. Block ionomer complexes, 216th ACS National Meeting, Boston, NV, Aug. 23, 1998.

194. Effects of Pluronic block copolymers on drug transport at the blood-brain barrier, 1998 Conference on Block ionomer complexes, XVI Mendeleev Congress on General and Applied Chemistry, Sankt-Petersburg, Russia, May 26, 1998.
195. Pharmaceutical Sciences and Technology, Dallas, TX, Apr. 4, 1998.
196. Polyelectrolyte complexes for DNA delivery, 3rd International Symposium on Polymer Therapeutics, London, Jan. 9, 1998.
197. Vesicles from block ionomer complexes. 214th ACS National Meeting, Las Vegas, NV, Sep. 11, 1997.
198. Amphiphilic block copolymers in drug delivery, 214th ACS National Meeting, Las Vegas, NV, Sep. 10, 1997.
199. Polyelectrolyte complexes for DNA delivery, Workshop on Polymeric Recognition of Biological Molecules at Polytechnic University, Brooklyn, NY, June 17, 1997.
200. Polycations and cationic block copolymers as DNA delivery vectors, Scanning Microscopy 1997 Meeting, Chicago, IL, May 14, 1997.
201. Novel lyophilic colloids and soluble complexes in drug delivery: an overview, 213th ACS National Meeting, San Francisco, CA, Apr. 1997.
202. Block ionomer complexes from poly(ethylene oxide)-block-polymethacrylate anions and cetylpyridinium cations, 213th ACS National Meeting, San Francisco, CA, Apr. 1997.
203. New approaches to targeting of bioactive compounds, Sixth International symposium on recent advances in drug delivery systems, Salt Lake City, UT, Feb. 1993.
204. Site specific drug targeting, International Exhibition and Conference on Pharmaceutical Ingredients and Intermediates, Wiesbaden, FRG, Nov. 1992.
205. Engineering of protein functional complexes in reversed micelles, Modern enzymology: problems and trends (in Commemoration of the 90th Anniversary of Prof. AE Braunstein (1902-1986), St. Petersburg, Russia, June 1992.
206. Drug transport through cell membrane and hematoencephalitic barrier, 2nd Conference "Biomedical Research Strategy on AIDS", Crans-Montana, Switzerland, Oct. 1991.
207. A new approach for creation of antiviral compounds: antibodies and oligonucleotides, modified with hydrophobic substituents, UNESCO Conference "Immunology, Virology and Society", Kiev, Ukraine, Sept. 1991.
208. Reversed micelles as matrix microreactors for chemical processing of macromolecules, 4th German-Soviet Symposium "Modern developments of physics and chemistry of polymers", Bishofgrun, FRG, Sept.-Oct. 1990.
209. Modification of biomacromolecules for their translocation across biological membranes, 1st German-Soviet Symposium "Mechanisms of regulation of the cell activity", Tashkent, Uzbekistan, Sept. 1989.
210. Attachment to biomacromolecules the ability for transmembrane transport, XIV Mendeleev Congress on Pure and Applied Chemistry, Tashkent, Uzbekistan, Sept. 1989.
211. Enhancement of biomacromolecule translocation across biomembranes, **Plenary Lecture**, 6th Conference of young scientists on Organic and Bioorganic Chemistry, Bechyne, Czechoslovakia, 1989.
212. Chemical engineering of biopolymers, 14-th IUB Congress, Prague, 1988.

Special Lectures:

213. Unity of scientists in the divisive world: For truth, peace & human rights, American Physical Society March 2022 Meeting (Session 29 Speaking Up for Human Rights of Scientists, Just as Important as in Andrei Sakharov's Times), Chicago, IL <https://youtu.be/16DeqMGk7j8?t=9377>
214. Stand united to combat global assault on truth, peace & human rights, International Workshop Sakharov-100: Physics, Peace, Human Rights, American Physical Society and RASA, May 21, 2021. <https://youtu.be/pcMmwNRFmZs>

215. Work of V.A. Kabanov as precursor of polymer therapeutics and nanomedicine. 6th All Russian Kargin Conference "Polymers 2014", Jan. 28, 2014
216. Polymer science to life science. Memorial conference dedicated to Prof. V.A Kabanov 75th birthday. Moscow State University, Moscow, Jan. 15, 2009.
217. Polymer science to life science. A phenomenal contribution of Prof. V.A Kabanov (1934-2006), European Polymer Congress, Portoroz, Slovenia, July 2, 2007.

Regional and state meetings and seminars:

218. A very high-capacity polymeric micelles for drug delivery, 2013 Annual Principal Investigators Meeting, Specialized Program of Research Excellence (SPORE) in Breast Cancer, Chapel Hill, NC, Oct. 11, 2013.
219. Polymeric Micelles and Drug Delivery, Triangle Center for Excellence for Materials Research and Innovation: Programmable Assembly of Soft Matter Duke, NC, May 13, 2013.
220. High Capacity Nanocarriers for Cancer Chemotherapeutics, CCNE - NCI Site Visit, Chapel Hill, NC, May 7, 2013.

Industrial Meetings:

221. Pluronic block copolymers for overcoming Pgp, Oral Drug Delivery Summit 2003 in Philadelphia, PA, Sept. 29, 2003.
222. CombiForm™: A new approach to increase efficacy in drug development, 6th International Drug Delivery Technologies & Deal Making Summit, Princeton, NJ, July 26, 2001.

Oral Posters and Panels (partial):

223. Nanopharmacology and molecular simulation (panel), IASTED International Conference on "Nanotechnology and Applications: NANA 2008, Crete, Greece, Sep. 29, 2008.
224. Recognition of DNA topology in reactions between plasmid DNA and cationic copolymers, 4th International Symposium on Polymer Therapeutics, London, England, Jan. 2000.
225. Pluronic block copolymers for drug delivery to the brain, 4th International Symposium on Polymer Therapeutics, London, England, Jan. 2000.
226. Effects of Pluronic block copolymers on drug transport in blood brain barrier, GRC on Drug Carriers in Biology and Medicine, Ventura, CA, Feb. 1998.
227. Block polycations for DNA delivery, 1st International Symposium on Polymer Therapeutics, London, England, Jan. 1996.

Lectures and seminars in academic institutions:¹¹

228. High-capacity polymeric micelles as transformative and translational technology for drug delivery, College of Pharmacy, Yeung-Nam University, Dec. 8, 2022 (JO Kim)
229. High-capacity polymeric micelles as transformative and translational technology for drug delivery, College of Pharmacy, Chung Ang University, Seoul, South Korea, Dec. 6, 2022 (KT Oh)
230. Convergent science of nano-delivery: A journey of a chemist, the University of Pennsylvania, Philadelphia, PA, Aug 4, 2021 (Vladimir Muzykantov).
231. Why chemists go to the uncharted expanses of biology? N.D. Zelinsky Institute of Organic Chemistry, Moscow, Russia, remote, Jun 6, 2021 (V Ananikov).

¹¹ The name of inviting scientist is given in brackets.

232. Why chemists go to the uncharted expanses of biology? "At the forefront of science" Lecture series, The National University of Science and Technology (MISIS), Moscow, Russia, remote, Jun 2, 2021 (Sergei Salikhov) <https://youtu.be/TPKvBvGPkzc>
233. Why is biology research so challenging for a chemist and what it could lead to, Siberian Federal University, Krasnoyarsk, Russia, remote, Apr 15, 2021 <https://youtu.be/8NcRZjGmqhU>.
234. A New Year eve's story on how challenging biology research is for a chemist and what it could lead to, Christmas Lectures, The National University of Science and Technology (MISIS), Moscow, Russia, remote, Dec. 23, 2020 (Sergei Salikhov). <https://youtu.be/AnbtFP7MLfE>
235. Super-high-capacity polymeric micelles for cancer therapeutics, Academy to Universities – Chemistry and Material Sciences in the Era of Pandemics, RAS Division of Chemistry and Material Sciences and MSU Chemical Faculty (online) (Evgeny Goodilin), Apr. 29, 2020. <https://youtu.be/lsgCUV8otMc>
236. Hyperloaded poly(2-oxazoline) micelles as drug carriers for cancer therapy, MD Anderson Department of Experimental Therapeutics, Houston, TX, April 17, 2019 (Gabriel Lopez-Berestein).
237. Nanoparticles, cells and exosomes for CNS therapeutics, Monash University School of Pharmacy, Melbourne, Australia, Feb. 7, 2019.
238. Hyperloaded poly(2-oxazoline) micelles as drug carriers for cancer therapy, D. Mendeleev University of Chemical Technology, Moscow, Russia, Dec 26, 2018 (Anna Sherbina).
239. Polymeric micelles, polyion complexes, cells and exosomes for drug delivery, Houston Methodist Research Institute, Houston, TX, Apr 20, 2018 (B Godin)
240. Polymeric micelles and polyion complexes as foundation of current nanomedicine, University of Southern Carolina, Columbia, SC, Dec 4, 2017 (Igor Roninson).
241. Polymeric micelles - A clinical nanomedicine technology, Virginia Tech, Blacksburg, VA, Nov 29, 2017 (Judy Rifle).
242. Very High-Capacity Polymeric Micelles for Drug Delivery, Fox Chase Cancer Center, May 25, 2017 (Vladimir Studitsky).
243. Polymeric micelles and polyion complexes as foundation of current nanomedicine, University of Utah, UT, April 6, 2017 (Hamid Ghandehari).
244. High-Capacity Polymeric Micelles for Drug Delivery, OSU/OHSU College of Pharmacy, Portland, OR, May 26, 2016 (Gaurav Sahay).
245. Polymeric Micelles for Drug Delivery – A Transformative Technology at Clinical Stage, Georgia Tech, Atlanta, GA, April 28, 2015 (John McDonald).
246. Polymeric Micelles for Drug Delivery – A Transformative Technology at Clinical Stage, 2nd Nanomedicine for Imaging and Treatment Conference, the University of Pennsylvania, Philadelphia, PA, April 1, 2015 (Vladimir Muzykantov).
247. Polymer Systems for Non-Viral Gene Delivery, Julius-Maximilians-Universität Würzburg, Würzburg, Germany, July 30, 2015 (Robert Luxenhofer).
248. Polymeric Micelles for Drug Delivery – A Transformative Technology at Clinical Stage, IQS, Universidad Ramon Llull, Barcelona, Spain, July 22, 2015 (Salvador Borrós Gómez).
249. Polymer Systems for Non-Viral Gene Delivery, IQS, Universidad Ramon Llull, Barcelona, Spain, July 21, 2015 (Salvador Borrós Gómez).
250. Nanomedicine and Drug Delivery Polymer Systems for Drug Delivery to the Brain, IQS, Universidad Ramon Llull, Barcelona, Spain, July 20, 2015 (Salvador Borrós Gómez).
251. Polymeric micelles from idea to clinics, 19th John G. Wagner Memorial Lecture, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor, May 9, 2014 (S.P. Schwendeman).

252. Nanomedicine – time to collect stones. From science fiction to clinical practice, Southern Federal University, Rostov at the Don, Russia, Jun. 19, 2013 (A.I. Minkin).
253. Polymeric Micelles for Drug Delivery – From Idea to Clinics, Massachusetts Institute of Technology, Boston, MA, May 21, 2013 (R. Langer).
254. Polymeric Micelles and Polyion Complexes for drug delivery: State of the art of a future drug delivery, Winship Cancer Institute of Emory University, Atlanta, GA, Jan. 25, 2013 (Dong M. Shin).
255. Polymeric micelles and polyion complexes for drug delivery: state-of-art and future directions, Nanotechnology seminar series, Stanford University, Stanford, CA, Dec. 13, 2012 (S.S. Gambhir).
256. Polymeric micelles and polyion complexes for drug delivery. When colloids become nanomedicines, Department of Pharmaceutical and Biomedical Sciences South, Carolina College of Pharmacy University of South Carolina, Columbia, SC, Nov. 5, 2012 (Igor Roninson).
257. Polymeric micelles: From bench to the bedside, Department of Pharmaceutical Sciences, Wayne State University, Detroit, MI, Oct. 18, 2011 (O. Merkel).
258. Recent developments in polymeric micelles for drug therapies, University Paris-South, Chatenay Malabry, France, Sep. 13, 2011 (K. Bouchemal).
259. Polymeric micelles: From bench to the bedside, A.E. Arbusov Institute of Organic and physical Chemistry, Kazan Science Center of Russian Academy of Sciences, Kazan, Russia, March 23, 2011 (Oleg G. Sinyashin).
260. How to translate innovative ideas to products without compromising ingenuity, Kazan State Medical University, Kazan, Russia, March 22, 2011 (A.P. Kiassov).
261. Polymeric micelles: From bench to the bedside, Kazan State Medical University, Kazan, Russia, March 22, 2011 (A.P. Kiassov).
262. Polymeric micelles: From bench to the bedside, School of Pharmacy, University of Southern California, Los Angeles, CA, March 3, 2011 (Sarah Hamm-Alvarez).
263. Polymeric micelles: From bench to the bedside, School of Pharmacy, University of California san Diego, Los Angeles, CA, March 2, 2011 (Adah Almutairi),
264. Polymeric micelles: From bench to the bedside, Division of Molecular Pharmaceutics, Center for Nanotechnology in Drug Delivery, University of North Carolina Eshelman School of Pharmacy, North Carolina, Chapel Hill, Feb. 21, 2011 (L. Huang).
265. Polymer nanomaterials for therapeutic drug delivery, Department of Chemical Enzymology, Faculty of Chemistry, Moscow State University, Moscow, Russia, Nov. 11, 2010 (Natalia L. Klyachko).
266. Polymer nanomaterials for therapeutic drug delivery, Department of Pharmacy, Changhai Hospital, Second Military Medical University, Shanghai, China, Oct. 25, 2010 (S. Gao).
267. Block Copolymers: from self-assembly to nanomedicine, All India Institute of Medical Sciences, New Delhi, India, Feb. 12, 2010 (S. Singha).
268. Block Copolymers: from self-assembly to nanomedicine, Center for Biomedical Engineering, Indian Institute of Technology, New Delhi, India, Feb. 12, 2010 (A.R. Ray).
269. Block Copolymers: from self-assembly to nanomedicine, Department of Biochemistry, Delhi University South Campus, New Delhi, India, Feb. 11, 2010 (A. Nag).
270. Polymer based drug and gene delivery, Faculté de Pharmacie, University Paris V, Paris, France, Dec. 9, 2009 (N. Mignet).
271. Block Copolymers: from self-assembly to nanomedicine, College of Pharmacy, Chung-Ang University, Seoul, South Korea, Dec. 1, 2009.
272. Block Copolymers: from self-assembly to nanomedicine, College of Pharmacy, Pusan University, Pusan, South Korea, Nov. 27, 2009.

273. Block Copolymers: from self-assembly to nanomedicine, College of Pharmacy, Youngnam University, Daegu, South Korea, Nov. 26, 2009.
274. Block Copolymers: from self-assembly to nanomedicine, Department of Medicine, Yonsei University, Seoul, South Korea, Nov. 25, 2009.
275. Block Copolymers: from self-assembly to nanomedicine, Department of Pharmacology, Institute for Translational Medicine and Therapeutics, University of Pennsylvania School of Medicine, Philadelphia, PA, Nov. 18, 2009 (Vladimir Muzykantov).
276. Block Copolymers: from self-assembly to nanomedicine, 33rd Annual Symposium "Polymers and Biomedical Applications", Department of Macromolecular Science and Engineering, University of Michigan, MI, Oct. 29, 2009.
277. Polymers: From plastics to innovative drug delivery systems, Department of Chemistry, Tsinghua University, Beijing, China, Aug. 31, 2009 (Xi Zhang).
278. Polymer micelles for drug delivery: from bench to bedside, Roswell Park Cancer Institute, Buffalo, NY, MA, Aug. 12, 2009 (Andrei Gudkov).
279. Polymer micelles for drug delivery: from bench to bedside, RedoxBiology Center Annual Retreat, UNL, Nebraska City, NE, Apr. 4, 2009 (Vadim Gladyshev).
280. Polymer micelles for drug delivery: from bench to bedside, Department Pathology and Microbiology Grand Rounds, UNMC, Omaha, NE, March 3, 2009.
281. Polymer Nanomaterials for Drug Delivery, Kurchatov Institute, Moscow, Russia, Dec. 2, 2008 (Yuri M. Kagan).
282. Polymer micelles for drug delivery: from bench to bedside, Virginia Tech, Nov. 21, 2008.
283. Polymer Nanomaterials for Drug Delivery, Department of Chemistry, Tsinghua University, Beijing, China, Oct. 30, 2008 (Xi Zhang).
284. Polymer Nanomaterials for Drug Delivery, Department of Chemistry, SHJTU, Shanghai, China, Oct. 29, 2008 (C.-M. Dong).
285. Polymer Nanomaterials for Drug Delivery, School of Pharmacy, HUST, Wuhan, China, Oct. 27, 2008 (Gao Li).
286. Nanomaterials for CNS drug delivery, Cedars-Sinai Medical Center, Los Angeles, CA, March 1, 2008 (Julia Ljubimova).
287. Nanomedicine: from bench to bedside, Emory-Georgia Tech Frontiers of Cancer Nanotechnology Seminar Series, Emory University, Atlanta, GA, Feb. 25, 2008 (S. Nie).
288. Nanomedicine: from bench to bedside, University Paris-South, Chatenay Malabry, France, Feb. 19, 2008 (Ruxandra Gref).
289. Nanopharmacology, Moscow State University Department of Chemical Enzymology, Moscow, Russia, Dec. 8, 2007 (N. Klyachko).
290. Nanomedicine: from bench to the bedside, UNMC Center for Clinical and Translational Research, University of Nebraska Medical Center, Omaha, NE, Sep. 24, 2007 (Jennifer Larsen).
291. Drug delivery and nanomedicine research, UNMC Eppley Cancer Center, University of Nebraska Medical Center, Omaha, NE, 2007.
292. Polymeric nanomaterials for drug delivery, Department of Pharmaceutical Sciences, College of Pharmacy, Nursing and Allied Science, North Dakota State University, Fargo, ND, Apr. 19, 2007 (J. Singh).
293. Polymeric nanomaterials for drug delivery, Cedars-Sinai Medical Center Grand Rounds, Los Angeles, CA, March 8, 2007.

294. Polymeric nanomaterials for drug delivery, Department of Biomedical Engineering & Chemistry, Duke University, Durham, NC, March 1, 2007 (W.M. Reichert).
295. Polymeric nanomaterials for drug delivery, Department of Pharmaceutical Sciences, University of Nebraska Medical Center, Omaha, NE, Feb. 9, 2007.
296. Polymeric nanomaterials for drug delivery, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor, MI, Dec. 6, 2006 (D. Smith).
297. Advances in polymer therapeutics and nanomedicine, Department of Pharmaceutical Sciences, University of Tennessee Health Science Center, Memphis, TN, Nov. 14, 2005 (Ram Mahato).
298. Advances in polymer therapeutics, Department of Materials Science and Engineering, Whiting School of Engineering Johns Hopkins University, Baltimore, MD, Sep. 28, 2005 (H-Q. Mao).
299. Advances in polymer therapeutics, Department of Chemical Engineering, Princeton University, Princeton, NJ, Sep. 21, 2005 (R.K. Prud'homme).
300. Polymer genomics: Shifting the gene and drug delivery paradigms, University of Tokyo, Tokyo, Japan, May 19, 2005 (Kazunori Kataoka).
301. Polymer genomics: Shifting the gene and drug delivery paradigms, Tokyo Institute of Technology, Yokohama, Japan, May 18, 2005 (T. Akaike).
302. Polymer genomics: Shifting the gene and drug delivery paradigms, Tokyo Women's Medical University, Tokyo, Japan, May 17, 2005 (Teruo Okano).
303. Polymer genomics: Shifting the gene and drug delivery paradigms, Tsukuba University, Tsukuba, Japan, May 16, 2005 (Yukio Nagasaki).
304. Polymer genomics: Shifting the gene and drug delivery paradigms, Macromolecules and Interfaces Institute, Virginia Tech, Blacksburg, VA, Apr. 27, 2005 (Judy Riffle).
305. Polymer genomics, Department of Pharmacology Seminar, UNMC, Omaha NE, Jan. 28, 2005 (Howard Gendelman).
306. Polymer genomics, Macromolecular Therapeutics Seminar, University of North Carolina Chapel Hill, Chapel Hill NC, Nov. 17, 2004 (R. Juliano).
307. Polymers for gene delivery: Where do we stand? Where do we go? Department of Biomedical Engineering Rutgers University, New Brunswick, NJ, Oct. 27, 2003 (M.L. Yarmush).
308. Polymers for gene delivery: Where do we stand? Where do we go? Department of Chemical Engineering, Iowa State University, Ames, IA, Oct. 2, 2003 (Suria K. Mallapragada)
309. Pluronic block copolymers for drug and gene delivery, Leslie-Dan School of Pharmacy, University of Toronto, Toronto, Canada, June 19, 2003 (K.W. Hindsmarsh).
310. Polymers for gene delivery, University of Illinois at Chicago, Chicago, IL, March 26, 2003 (H. Onyksel).
311. Pluronic block copolymers for overcoming drug resistance in cancer, University of Wisconsin-Madison, Madison, WI, Feb. 27, 2003 (Joe Robinson).
312. Polymers for gene delivery, Polytechnic University, Brooklyn, NY, Nov. 15, 2002 (C. Georgakis).
313. Polymers for gene delivery, University of Pennsylvania, Department of Bioengineering, Philadelphia, PA, Nov. 12, 2002 (D. Hammer).
314. Pluronic block copolymers for drug delivery in cancer, Roswell Park Cancer Center, Buffalo, NY, Nov. 7, 2002 (C.W. Porter).
315. Pluronic block copolymers for drug and gene delivery, Department of Pharmaceutical Sciences, University of Southern California, Los Angeles, CA, Nov. 1, 2002 (Vincent Lee).
316. Polymers for gene delivery, University of Minnesota, Department of Biomedical Engineering, Minneapolis, MN, Oct. 28, 2002 (R.T. Tranquillo).

317. Polymers for gene delivery, University of Wisconsin-Madison, Madison, WI, Sep. 13, 2002 (Glen Kwon).
318. Pluronic block copolymers for drug delivery in cancer, Eppley Cancer Center Grand Rounds, University of Nebraska Medical Center Omaha, NE, Sep. 11, 2002.
319. Polymers for gene delivery, Korea Institute of Science and Technology, Seoul, Korea, July 26, 2002 (S. Y. Jeong).
320. Pluronic block copolymers for drug and gene delivery, Department of Pharmaceutical Sciences, SUNY Buffalo, Buffalo, NY June 21, 2002 (W. Jusko).
321. Polycations for DNA delivery into a cell, Department of Chemistry and Chemical Biology, Stevens Institute of Technology, Hoboken, NJ, Apr. 3, 2002 (Svetlana Sukhishvili).
322. Complexes of block ionomers with oppositely charged surfactants, Department of Applied Chemistry, Kansai University, Osaka, Japan, July 16, 2001 (T. Ouchi).
323. What hinders and how to achieve effective gene therapy with polycations? Department of Physics, Kyoto University, Kyoto, Japan, July 12, 2001 (K. Yoshikawa).
324. What hinders and how to achieve effective gene therapy with polycations? Osaka University, Osaka, Japan, July 10, 2001 (Y. Suda).
325. What hinders and how to achieve effective gene therapy with polycations? Department of Material Science, University of Tokyo, Tokyo, Japan, July 9, 2001 (Kazunori Kataoka).
326. Block ionomer complexes: self-assembly and applications in drug delivery, Polytechnic University, Brooklyn, NY, Nov. 6, 2000 (Richard Gross).
327. Pluronic block copolymers: novel sensitizers of cells expressing efflux proteins, University of Minnesota, Drug Delivery Center Open House/Advanced Therapies Seminar Series Speaker, Minneapolis, MN, Oct. 5, 2000 (David Grant).
328. Novel polymers for drug delivery, Dow Lecture in Polymer Science, University of Detroit Mercy, Nov. 30, Detroit, MI, 1999 (S. Schlick).
329. Novel polymers for drug delivery, Tokyo Institute of Technology, Yokohama, Japan, Nov. 12, 1999 (T. Akaike).
330. Novel polymers for drug delivery, Science University of Tokyo, Noda, Japan, Nov. 11, 1999 (Yukio Nagasaki).
331. Polycations for gene delivery, Institute of Biomedical Engineering, Tokyo Women's Medical University, Tokyo, Japan, Nov. 10, 1999 (T. Okano).
332. Interactions of amphiphilic block copolymers with drug efflux systems in blood brain and intestinal barriers: implications in drug delivery, Kyoto Pharmaceutical University, Kyoto, Japan, Nov. 8, 1999 (Akira Yamamoto).
333. Non-viral gene delivery: taking polyplexes from in vitro to in vivo, Kyoto University, Graduate School of Pharmaceutical Sciences, Kyoto, Japan, May 28, 1999 (Y. Takakura).
334. Amphiphilic block copolymers in drug delivery: from micellar microcontainers to combinatorial formulation, KYshu University, Graduate School of Engineering, Department of Chemistry and Biochemistry, Fukuoka, Japan, May 21, 1999 (N. Kimizuka).
335. Self-assembly of block ionomers and surfactants of opposite charge, KYshu University, Division of Supramolecular Chemistry, Institute for Fundamental Research of Organic Chemistry, Fukuoka, Japan, May 20, 1999 (A. Takahara).
336. Non-viral gene delivery: taking polyplexes from in vitro to in vivo, Tokyo Institute of Technology, Yokohama, Japan, May 19, 1999 (T. Akaike).
337. Amphiphilic block copolymers in drug delivery: from micellar microcontainers to combinatorial formulation, Institute of Biomedical Engineering, Tokyo Women's Medical University, Tokyo, Japan, May 18, 1999 (T. Okano, M. Yokoyama).

338. Non-viral gene delivery: taking polyplexes from in vitro to in vivo, Department of Material Science, University of Tokyo, Tokyo, Japan, May 17, 1999 (Kazunori Kataoka).
339. Polycations as carriers for gene delivery, Bioengineering, University of Washington, Seattle, WA, Nov. 13, 1998 (A. Hoffman).
340. Amphiphilic block copolymers in drug delivery, Division of Pharmaceutics, College of Pharmacy, Ohio State University, Columbus, OH, Oct. 16, 1998 (W. Hayton).
341. Block ionomer complexes, Department of Chemistry, Purdue University, Lafayette, IN, March 5, 1998 (I. Szeifer).
342. Block ionomer complexes, Department of Polymer Science, Moscow State University, Moscow, Russia, Jan. 16, 1998 (Victor A. Kabanov).
343. Block ionomer complexes, Material Research Program and Department of Chemistry, University of Nebraska at Lincoln, Lincoln, NE, Dec. 19, 1997 (David Selmeyer).
344. Self-assembling polymer complexes for drug delivery, Eppley Institute for Research in Cancer and Allied Diseases, University of Nebraska Medical Center, Omaha, NE. Feb. 16, 1995 (Barry Gold).
345. Self-assembling polymer complexes for drug delivery, School of Pharmacy, Wayne State University, Detroit, MI, June 15, 1994.
346. Self-assembling polymer complexes for drug delivery, School of Pharmacy, University of Wisconsin-Madison, Madison, WI, May 19, 1994.
347. Self-assembling polymer complexes for drug delivery, School of Pharmacy, The University of North Carolina at Chapel Hill, Chapel Hill, NC, Apr. 25, 1994 (Garry M. Pollack).
348. Self-assembling polymer complexes for drug delivery, College of Pharmacy, University of Illinois at Chicago, Chicago, IL, Apr. 18, 1994.
349. Self-assembling polymer complexes for drug delivery, College of Pharmacy, University of Nebraska Medical Center, Omaha, NE, Apr. 13, 1994.
350. Structure and function of biopolymers in reversed micelles, Polymer, McGill University, Montreal, PQ, Canada, March 4, 1993 (Adi Eisenberg).
351. Site-specific drug targeting, Wuppertal University, Wuppertal, Germany, Nov. 10, 1992 (M. Schneider).
352. New polymeric systems for targeting of bioactive compounds, Laboratory of Biophysics, National Museum of Natural History, Paris, France, Feb. 28, 1992 (Claude Helene).
353. New polymeric systems for targeting of bioactive compounds, Medical Faculty, Rene Descartes University, Paris, France, Feb. 21, 1992 (Marcel Waks).
354. New polymeric systems for targeting of bioactive compounds, Department of Polymer Science and Engineering, University of Massachusetts, Amherst, MA, Dec. 5, 1991 (David Tirrel).
355. New macromolecular systems for targeting of bioactive compounds, School of Medicine, University of Connecticut Health Center, Farmington, CT, Dec. 4, 1991 (George Y. Wu).
356. New macromolecular systems for targeting of bioactive compounds, Department of Chemical Engineering, Virginia Polytechnic Institute and State University, Blacksburg, VA, Dec. 2, 1991 (Rick Davis).
357. New macromolecular systems for targeting of bioactive compounds, Department of Chemistry, Northwestern University, Evanston, IL, Nov. 23, 1991 (R. Letsinger).
358. New approaches for drug targeting across cell membranes and blood/brain barrier, Department of Microbiology and Immunology, University of Miami, Miami, FL, Nov. 21, 1991 (J. Peacock).
359. Potential antivirals based on hydrophobized antibodies and oligonucleotides, ACS Georgia Section, Atlanta, GA, Nov. 19, 1991.

360. Reversed micelles as matrix microreactors for chemical processing of biomacromolecules, Department of Chemistry, Emory University, Atlanta, GA, Nov. 18, 1991 (Fred M. Menger).
361. Micelles of polymeric surfactants as microcontainers for drug targeting, Department of Pharmaceutics, University of Utah, Salt Lake City, UT, Nov. 11, 1991 (Sund-Wan Kim).
362. Membrane active biopolymers as a tool for regulation of cell activity and drug delivery, The Center for Controlled Chemical Delivery and Department of Pharmaceutics, University of Utah, Salt Lake City, UT, Nov. 8, 1991 (Sung-Wan Kim).
363. Micelles of polymeric surfactants as microcontainers for drug targeting, Polymer Institute, ETH, Zurich, Sep. 30, 1991 (P. Luisi).
364. Enzymatic catalysis in reversed micelles, Institute of Organic Chemistry, Johannes Gutenberg University, Mainz, Oct. 9, 1990 (Helmut Ringsdorf).
365. Enhancement of biopolymer penetration into a cell and nontraditional drug delivery systems, Institute for Physiological Chemistry, Physical Biochemistry and Cell Biology, Munchen University, Munchen, Oct. 8, 1990 (W. Neupert).
366. Enhancement of biopolymer penetration into a cell, Research Institute for Biosciences, Science University of Tokyo, Yamazaki, Aug. 10, 1990 (T. Tsuruta).
367. Enhancement of biopolymer penetration into a cell, Ibaraki University, Mito, Japan, Aug. 9, 1990 (Y. Osada).
368. Enhancement of biopolymer penetration into a cell, Tokyo Women's Medical College, Tokyo, Aug. 8, 1990 (Teruo Okano).
369. Enhancement of biopolymer penetration into a cell, Department of Polymer Chemistry, Waseda University, Tokyo, Aug. 7, 1990 (E. Tsuchida).
370. Structure and function of biopolymers in reversed micelles, Ibaraki University, Mito, Japan, Aug. 6, 1990 (Y. Osada).
371. Chemical engineering of biopolymers: Drug targeting and mimetic studies, Immunology Department, Institute Pasteur, Paris, Jan. 22, 1990 (Gerard Buttin).
372. Chemical engineering of biopolymers, Institute of Chemistry, Louis Pasteur University, Strasbourg, Jan. 19, 1990 (Jean-Marie Lehn).
373. Membrane active biopolymers in model systems and cells, Medical Faculty, Renes Descartes University, Paris, Jan. 18, 1990 (Marcel Waks).
374. Structure and function of biopolymers in reversed micelles, Physico-Chemical Faculty, Pierre and Marie Curie University, Paris, Jan. 16, 1990 (M. Pileni).

Lectures at companies (partial):

375. Super-High-Capacity Polymeric Micelles for Cancer Therapeutics ...and Few Words about Covid-19 Therapeutics, Syngenta, (remote), Jun 6, 2020.
376. Very High-Capacity Polymeric Micelles for Drug Delivery, NOF Corporation, Tsukuba, Japan, Dec. 2, 2016.
377. Nanomedicines for CNS Delivery of Polypeptides, Teva, Tel Aviv, Israel, Sep. 13, 2016.
378. SP1049C: Drug discovery through formulation, Taiho, Tokyo, Japan, Dec. 21, 2010.
379. Polymer Micelles: From bench to bedside, Mersana Therapeutics, Inc., Boston, MA, Nov. 9, 2009.
380. Polymer Micelles: From bench to bedside, 2Y-Chem, Shanghai, China, Oct. 29, 2008.
381. Polymer genomics: pharmacology and toxicology of nanomaterials for drug delivery, Lilly Nanotechnology Symposium, Lilly Corporate Center, Indianapolis, IN, Oct. 12, 2007.
382. Charge driven self-assembly at the nanoscale, FMC Corporation, Princeton, NJ, May 31, 2005.

383. Nanomedicines for delivery of biologically active compounds, Keynote Lecture, National Starch Company, Bridgewater, NJ, Apr. 23, 2004.
384. Polymers for delivery of nucleic acids, Sirna Therapeutics, Boulder, CO, May 26, 2004.
385. Pluronic block copolymers for improved drug delivery, NaPro Biopharmaceuticals, Inc., Denver, CO, March 6, 2002.
386. Block copolymer-based drug delivery systems, Mitsubishi-Tokyo Pharmaceuticals, Inc., Yokohama, Japan, July 10, 2001.
387. Delivery of oligonucleotides using polycations, ISIS Pharmaceuticals, Carlsbad, CA, Apr. 19, 2002.
388. Amphiphilic block copolymers in drug delivery, Eli Lilly, Indianapolis, IN, Nov. 1997.
389. Polyelectrolyte and block ionomer complexes for gene delivery, Johnson & Johnson, New Brunswick, NJ, Oct. 8, 1997.
390. Amphiphilic block copolymers in drug delivery, Emisphere Technologies, Inc., Hawthorne, NY, Sep. 22, 1997.
391. Block copolymers in gene delivery, Bristol Myers Squibb, Princeton, NJ, Feb. 1997.
392. Block copolymers in gene delivery, Nextar Pharmaceuticals Inc., Boulder, CO, Dec. 1996
393. Block copolymers in gene delivery, Hybridon Inc., Worcester, MA, Nov. 1996.
394. Interpolyelectrolyte gene delivery systems, Ribozyme Pharmaceuticals Inc., Boulder, CO, March 11, 1996.
395. New drug delivery systems, Hercules Inc., Wilmington, DE, March 1, 1993.
396. New polymeric systems for targeting of bioactive compounds, Rhone-Poulenc Rorer, Paris, France, Feb. 24, 1992.
397. Membrane active biopolymers and their supramolecular complexes as tools for regulation of cell activity and drug delivery, Tanox Biosystem, Inc., Houston, TX, Nov. 13, 1991.

Public lectures, podcasts and videos (partial):

398. Pandemics: from “Spanish flu” to COVID-19 (In Russian), Lectures at Radio Zvezda, June 2021
https://radiozvezda.ru/podcast/oblast-znaniy/pandemiya-ot-ispanki-do-covid-19/?sort_by=date
<https://youtu.be/GhJ4SLSQuQY>
399. I am not Afraid of the Vaccine! (In Russian), Lectures at Radio Zvezda, June 2021
https://radiozvezda.ru/podcast/oblast-znaniy/ya-privivki-ne-boyus/?sort_by=date <https://youtu.be/8ctsHQ3koTw>
400. Nanomedicine – What is It? (In Russian), Lectures at Radio Zvezda, June 2021
https://radiozvezda.ru/podcast/oblast-znaniy/cto-takoe-nanomedsina/?sort_by=date
<https://youtu.be/NywiTftxdHQ>
401. Modern Medicine Against Cancer (In Russian), Lectures at Radio Zvezda, June 2021
https://radiozvezda.ru/podcast/oblast-znaniy/sovremennaya-medsina-protiv-raka/?sort_by=date
<https://youtu.be/njpKYD3eHw4>
402. Scientists in Search of Truth (In Russian), Lectures at Radio Zvezda, June 2021
https://radiozvezda.ru/podcast/oblast-znaniy/uchenye-v-poiskah-pravdy/?sort_by=date
<https://youtu.be/YjMDBDuljRQ>
403. Nanomedicine – time to collect stones. From science fiction to clinical practice (In Russian), Festival of Science (Festival Nauki), Moscow, Oct. 14, 2012 <http://www.festivalnauki.ru/video/13494>
404. New drug developments: Nanotechnology for cancer therapy, Mini-Medical School “Cancer: Discovery, Development and Delivery: From the Laboratory to the Community” Omaha, NE, Apr. 5, 2005
405. Drug delivery and nanomedicine, KIWANIS, Omaha, NE, March 31, 2003

406. College of Pharmacy: Drug Delivery Research Program, University of Nebraska Board of Regents, Omaha, NE, Jan. 18, 2002
407. Drug delivery to targeted sites, Mini-Medical School "Genes and Chips", Omaha, NE April 19, 2001
408. College of Pharmacy Research Initiative: Drug Delivery to Targeted Sites, Chancellor's Board of Counselors, Lincoln, NE, Oct. 11, 2000

Authored media articles / columns (partial):

409. Kabanov A. Megagrants for Russian Science (In Russian) – www.vedomosti.ru / July 02, 2020 <https://www.vedomosti.ru/opinion/columns/2020/07/01/833781-megagranti-nauki>
410. Kabanov A. Megagrants for Russian Science (In Russian) – p220.ru / 08.07.2020 <https://p220.ru/media/news/megagranty-dlya-rossiyskoy-nauki/>
411. Kabanov A. The Russian Health Foundation (In Russian) – www.vedomosti.ru / May 08, 2020 <https://vedomosti.ru/opinion/articles/2020/05/07/829794-fond-zdorovya>
412. Kabanov A. Virus for the system: How does USA combat the pandemic (In Russian) – rbc.ru / Apr. 17, 2020 <https://www.rbc.ru/opinions/society/17/04/2020/5e983e4a9a7947d66a96ab86?from=center>
413. Kabanov A. Life of North Carolina scientists in the beginning of the pandemic (In Russian) – trv-science.ru / 07.04.2020 / № 301 p. 8 <https://trv-science.ru/2020/04/07/zhizn-uchenyx-v-severnoj-karoline-v-nachale-epidemii/>
414. Kabanov A. The feeling of freedom regained (in Russian) – trv-science.ru / 24.03.2020 / № 300 p. 2 <https://trv-science.ru/2020/03/24/chuvstvo-vnov-obretennoj-svobody/>
415. Kabanov A. Big challenges: How to stop preparing for the previous war? (in Russian) – trv-science.ru / 06.06.2017 / № 230 p. 1 <http://trv-science.ru/2017/06/06/bolshiye-vyzovy/>
416. Kabanov A., Sagdeev R. Science convergence: Do we need to put all scientists under the same roof? (in Russian) – trv-science.ru / 26.01.2016 № 196 p. 2–3 <http://trv-science.ru/2016/01/26/konvergenciya-nauk/>
417. Kabanov A., Sagdeev R. Why does the Kremlin need convergence technologies (in Russian) – www.vedomosti.ru / Jan. 25 2016 <http://www.vedomosti.ru/opinion/articles/2016/01/26/625453-kremlyu-konvergentnie-tehnologii>

Media interviews and broadcasted programs (partial):

418. "What is happening in Russia is a civilizational catastrophe." What will the isolation of Russian science turn out to be? (In Russian) – <https://www.sibreal.org> / July 18, 2022 <https://www.sibreal.org/a/chem-obernetsya-izolyatsiya-rossiyskoy-nauki-31941698.html>
419. The fight against human aging: slow down and rejuvenate (In Russian) – OTR Public TV of Russia / Jan 26, 2022 <https://youtu.be/RloLmeShnEc> <https://otr-online.ru/programmy/gamburgskii-schet/kak-sovremennaya-nauka-mozhet-protivostoyat-stareniyu-56529.html>
420. The legacy of Andrei Sakharov and the state of Russian science today – On The Science Show with Robyn Williams, ABC Radio National / June 12, 2021 <https://www.abc.net.au/radionational/programs/scienceshow/the-legacy-of-andrei-sakharov-and-the-state-of-russian-science/13384068>
421. Sakharov's phenomenon (In Russian) – OTR Public TV of Russia / May 22, 2021 <https://youtu.be/W5geVnFwMFw>.
422. Scientists petition to end political persecution in Russia – On The Science Show with Robyn Williams, ABC Radio National / May 1 2021 <https://www.abc.net.au/radionational/programs/scienceshow/scientists-petition-to-end-political-persecution-in-russia/13322224>
423. Markina N. Chemists and nanomedicine. Chemistry and life, 2020, № 12, 2-15 www.hij.ru

424. In isolation science in Russia will die (In Russian) – s-t-o-l.com / Dec. 05, 2020 <https://s-t-o-l.com/gosudarstvo-i-chelovek/v-izolyatsii-nauka-v-rossii-umryot/>
425. Why would the scientists living and working in English-speaking environment deliver lectures in Russian? (in Russian) – OTR Public TV of Russia / Dec. 19, 2020 <https://youtu.be/aS96qzvGMWg>.
426. Inefficient vaccine is a failure, unsafe vaccine is a catastrophe (In Russian) – OTR Public TV of Russia / Oct. 24, 2020 <https://youtu.be/MpXxVAUCqtQ>
427. System of scientific publications in our country is undergoing existential crisis (In Russian) – Indicator.Ru / Oct. 13, 2020 <https://indicator.ru/chemistry-and-materials/sistema-nauchnykh-publikacii-v-nashei-strane-perezhivaet-ekzistencialnyi-krizis.htm>
428. Return to restrictions: will there be a second wave of coronavirus (In Russian) – Russia-24 / Sep. 25, 2020 <https://youtu.be/JjinUWG331M>
429. Expert on the development of the coronavirus pandemic (In Russian) – Russia-24 / May 25, 2020 <https://youtu.be/JTV9IkeVJI4>
430. Medicine runs out of time. Chemist on the coronavirus drugs (In Russian) – Anews.com / April 30, 2020 <https://anews.com/novosti/128547211-u-mediciny-net-vremeni-himik-o-lekarstvah-ot-koronavirusa.html>
431. Expert on the spread of coronavirus in USA and countermeasures (In Russian) – Russia-24 / April 6, 2020 <https://www.vesti.ru/videos/show/vid/833661/cid/1/> <https://youtu.be/vtt2ecd4i4> via vesti.ru
432. Opinion – RAS corresponding member Alexander Kabanov on COVID-19 in USA and World (In Russian) – Russia-24 / April 1, 2020 https://www.youtube.com/watch?v=rEI0FI_LQGY via vesti.ru
433. Who and how searches medicines against cancer (In Russian) – Harvard Business Review Russia / August 23, 2019 <https://amp.hbr-russia.ru/biznes-i-obshchestvo/nauka/807920>
434. Alexander Kabanov - Will modern science diplomacy bear fruit? (In Russian) – OTR Public TV of Russia <https://youtu.be/h1R9edQmEuY> March 28, 2019 <https://otr-online.ru/programmy/gamburgskii-schet/anons-aleksandr-kabanov-prineset-li-plody-sovremennaya-nauchnaya-diplomatiya-36131.html>
435. Exactly the reputational aspects will define the future of scientific journals (In Russian) – Indicator.Ru / April 15, 2019 <https://indicator.ru/humanitarian-science/budushee-nauchnyh-zhurnalov.htm>
436. Why there is none and can't be one "pill against cancer (In Russian) – IF Инвест-Форсайт / June 16, 2019 <https://www.if24.ru/tabletki-ot-raka/>
437. Building bridges (In Russian) – trv-science.ru / 20.11.2018 / № 267 p.4 <https://trv-science.ru/2018/11/20/stroit-mosty/>
438. Laboratory at the junction of sciences and generations (In Russian) – Indicator.Ru / March 7, 2018 <https://indicator.ru/chemistry-and-materials/intervyu-aleksandr-kabanov.htm>
439. There are many steps up and it is important to walk them all (In Russian) – Siberian Forum / Nov. 2017 <http://sibforum.sfu-kras.ru/node/1001>
440. Is Russia in need of science diaspora? (In Russian) trv-science.ru / 04.07.2017 / № 232 p.4 <http://trv-science.ru/2017/07/04/nauchnaya-diaspora-rossii-nuzhna/>
441. Overcoming barriers (in Russian) – TASS Science <https://chrdk.ru/other/kabanov-interview> / 16.11.2017
442. More postdocs for Russian science: Interview with Alexander Kabanov (in Russian) – Indicator.Ru / November 16, 2016 <https://indicator.ru/chemistry-and-materials/intervyu-kabanova.htm>
443. Tumor hunters (In Russian) – Rossiyskaya Gazeta <https://rg.ru> / 03.02.2015 <https://rg.ru/2015/02/04/lekarstva.html>
444. Treatment by address (In Russian) – TASS Science / 10.03.2015 <https://nauka.tass.ru/sci/6823048>
445. Conflict of interest: How is it counteracted in the West? (In Russian) – trv-science.ru / 29.07.2014 / № 159 p. 2-3 <https://trv-science.ru/2014/07/konflikt-interesov-kak-s-ehitim-boryutsya-na-zapade/>

446. Young people choose nano? (In Russian) – polit.ru / Jul. 20, 2014

https://polit.ru/article/2014/07/20/nano2014_msu/

447. From fantasy to real science (In Russian) – erazvitie.org / 2014-04-02 <http://erazvitie.org/article/ot-fantazii-k-nauke>

448. Russian enzyme turned out to be orders of magnitude more active (In Russian) – gazeta.ru / 18.11.2012

https://www.gazeta.ru/science/2012/10/18_a_4816185.shtml

449. Megagrants: critical opinion of the winner (In Russian) – NanoNewsNet / March 17, 2011

<https://www.nanonewsnet.ru/articles/2011/megagranty-kriticheskoe-mnenie-pobeditelya>

450. Nanomedicine against cancer (In Russian) – gazeta.ru / 26.11.2010

https://www.gazeta.ru/science/2010/11/25_a_3446833.shtml

TEACHING AND MENTORING ACTIVITIES:**a. Lectures in team-taught courses:**Undergraduate/ProfessionalUNMC

- PHSC 570 "Pharmaceutical Sciences 1", required, 5 cr., 1999-2006 (S)
- PHSC 550 "Introduction to Pharmacy", required, 4 cr., 1999-2001 (F)
- PHSC 570/870 "Pharmaceutics", required, 4 cr., 1996-1998 (S)

UNC

- PHCY 411 Basic Pharmaceutics II, 3 cr., 2014 (S)

MSU

- Modern problems of enzymology and medical biotechnology (specialty), 2021 (F)
- Selected chapters in biochemistry and biotechnology (specialty, in English), 2020 (S), 2021 (S)

GraduateUNMC

- PHSC 830 "Advanced Medicinal Chemistry", graduate, 3 cr., 1998 (F)
- PHSC 845 "Quantitative Pharmaceutical Analysis", graduate, 4 cr., 2000 (S, F)
- PHSC 851 "Innovative Drug Delivery Systems", 1997, 1999, 2001, 2004 (S).
- PHSC 852 "Pharmaceutical Chemistry", 2008 (S).
- PHSC 885 "Advanced Pharmaceutics I", 1996, 1998, 2000, 2002 (F).
- PHSC 885 "Physical Pharmacy", 2008 (F), 2011 (S).
- PHSC 886 "Advanced Pharmaceutics II", 3 cr., 1997, 1999 (F).
- PHSC 960 "Current Topics in the Pharmaceutical Sciences", 1 cr, 1998 (F,S), 2001 (S), 2006 (S)
- PHAR 905 "Molecular Pharmacology", 2 cr. 1997, 1999, 2000 (S)

UNC-Chapel Hill

- DPMP 738 "Nanomedicine", 3 cr., 2019 (S).
- MOPH 868 "Advances in Drug Delivery and Nanomedicine", 6 cr., 2016 (F), 2017 (F)
- MOPH 864 "Advances in Drug Delivery", 3 cr., 2013 (F), 2015 (S).
- MOPH 738 "Nanomedicine", 3 cr., 2012 (F), 2014 (F).

MSU

- Selected chapters of enzymology and medical biotechnology, 2020 (F), 2021 (F)
- Modern problems of nanomedicine and drug delivery, 2020 (S), 2021 (S), 2022 (S)

b. Coordinated/supervised courses:UNMC

- PHSC 890 "Polymer Therapeutics", graduate, 3 cr. 2003, 2005, 2007, 2010 (S).
- PHSC 970 "Seminar in Pharmaceutical Sciences", graduate, 1 cr, 1999-2001 (F,S).
- PHSC 886 "Advanced Pharmaceutics II", graduate, 3 cr., 1997, 1999 (F).

UNC-Chapel Hill

- DPMP 862/863 "Special Topics in Advanced Pharmaceutics" 3 cr., 2018 (S), 2018 (F)/ 2019 (S), 2019 (F)/ 2020(S), 2020 (F)/ 2021 (S), 2021 (F)/ 2022 (S), 2022 (F)/ 2023 (S)

- MOPH 862 “Advanced Pharmaceutics/Advanced Physical Pharmacy”, 3 cr., 2015 (S), 2016 (S), 2017 (S), (course director, designed and recorded new flipped class, provide the major share of pre-recorded classes and in class lessons taught).

c. Educational technology and methods:

- 1997-2000 Internet Course on Physicochemical Principles of Pharmaceutics (undergraduate and graduate versions) - one of the early web located power point courses in Pharmaceutics that that was used in the end of 90's early 2000s by many instructors in the Unites States in their teaching
- 2010-pres **Reverse Conceptual Project Engineering (RECOPE):** Gaymalov Z, Kabanov A (2017) RECOPE: How to succeed in bringing ideas from academia to market without compromising ingenuity. *Nanomedicine: Nanotechnology, Biology and Medicine* 13(3):795-800. doi: 10.1016/j.nano.2016.10.007. An educational and experiential approach applied in academic setting to facilitate biomedical research translation from bench to bedside. By using expertise of diverse set of biomedical professionals and trainees to solve a problem early in the course of the research, RECOPE helps to make research goals more relevant to the society needs and translatable in a long-term perspective.

d. Short Courses and other Educational Lectures (continued from the list of lectures):

452. Short Course in “Polymer-Based Nanomedicines”, 3 lectures (6 h) College of Pharmacy, Chung-Ang University, Seoul, South Korea, Dec. 5-7, 2022:
- Lecture 1: “Principles of Polymer-Based Drug Carriers”
 - Lecture 2: “Block Copolymers and Polymeric Micelles for Drug Delivery”
 - Lecture 3: “Polyion Complexes for Design of Delivery Systems for Biomacromolecules”
453. Special Course “Nanomedicine and Drug Delivery”, 2 lectures (4 h), M. V. Lomonosov Moscow State University, Moscow, Russia, 2018
454. Special Course “Nanomedicine and Drug Delivery”, 2 lectures (3 h), M. V. Lomonosov Moscow State University, Moscow, Russia, Feb. 15 – Nov. 22, 2017
455. Special Course “Nanomedicine and Drug Delivery” (continued), 5 lectures (7.5 h), M. V. Lomonosov Moscow State University, Moscow, Russia, Feb. 19 – Feb. 19, 2016
456. Special Course “Nanomedicine and Drug Delivery”, 7 lectures (10.5 h), M. V. Lomonosov Moscow State University, Moscow, Russia, Oct. 30 – Nov. 5, 2015
457. Polymeric Micelles for Drug Delivery – A Transformative Technology at Clinical Stage, Würzburg Summer School 2015 on Supramolecular Nanosystems, Würzburg, Germany, July 31, 2015.
458. Special Course “Nanomedicine and Drug Delivery”, 13 lectures (20 h), Technical University of Dresden, Dresden, Germany, June 8 – June 18, 2015
459. Nanomedicine from bench to bedside, Special Course in Nanopharmacology and Nanomedicine, Omaha, NE, June 4, 2008.
460. Nanomedicine from bench to bedside, ACS Omaha Chapter, Omaha, NE, Apr. 8, 2008.
461. Polymer Nanomaterials for Drug Delivery, AAPS Webinar, Funded by a grant from AstraZeneca. Feb. 29, 2008.
462. Novel polymer materials for drug and gene delivery (5-lectures), Short Course at Moscow State University Faculty of Chemistry, Moscow, Russia, Feb. 17-21, 2003.
463. Self-assembling systems for drug delivery, ACS Short Course on “Chemistry, Biology and Applications of Bioconjugates” (Peter Senter, org.), San Diego, CA, March 30-31, 2001.

e. Workshops:

2016-pres. Founder and Director, **Carolina Nanoformulation Workshop (CNW)**, Chapel Hill, NC, 2016, 2017, 2018, 2020: CNW is a unique training mechanism focusing on nanotechnology-based approaches to address pharma and biopharma needs for delivery of clinically relevant molecules. This workshop consists of a three-day lecture/seminar block and two days of hands-on, practical training and discussion. The workshop attendees include scientists from industry and academia, graduate students, postdocs and faculty from UNC and elsewhere.

f. Training program(s):

2015-pres. Founder and Director, **T32 Carolina Cancer Nanotechnology Training Program (C-CNTTP)**, NIH/NCI (1T32CA196589). C-CNTTP is a 24 to 36 mo. National Cancer Institute–sponsored T32 postdoctoral training program offered at the UNC Eshelman School of Pharmacy at the University of North Carolina at Chapel Hill. The overarching goal of the CCNTTP is to equip a cohort of outstanding young scientists with the multidisciplinary concepts and skills needed to improve cancer diagnosis and therapy based on concepts, tools and discoveries made in nanoscience and nanotechnology.

g. Graduate supervisory/advisory committees (other than advised students):

1996-2000 Sriramakamal Jonnalagadda, Ph.D.
 1998-1999 Aimee Beth Schreiner (Kratina), M.S.
 1998-2003 Bandi Nagesh, Ph.D.
 1998-2000 Sinjan De
 1998-2002 Ana Maria Soto, Ph.D., Zhang Yan, Ph.D.
 1998-2004 Haiqing Dai, Ph.D., Tim Spitzinberger, Ph.D.
 2000-2004 Surya P. Ayalasomayajula, Ph.D.
 2000-2005 Corbin Bachmeier, William J. Trickler, Ronald Shinkya
 2002- Manjori Ganguly
 2003-2004 Jian Zhang, M.S.

h. Other:

UNMC College of Pharmacy class 2005 student advisor, 2002-2005.
 UNMC College of Pharmacy class 2002 student advisor, 1998-2002.
 UNMC Mini-Medical School, 2001.
 UNMC Mini-Medical School, 2005.

LABORATORY:**Graduate students:**

- 1986 – 1989 Sergey N. Nametkin, Candidate of Chemical Sciences¹², MSU¹³ 1989 “Modulation of catalytic activity of enzymes by altering their supramolecular organization in reverse micelle systems”; A.V. Levashov, A.V. Kabanov, co-advisors.
- 1987 – 1990 Maria M. Khrutskaya, Candidate of Chemical Sciences, MSU November 1990 “Design of conjugates of synthetic and natural macromolecules using reverse micelles as template-microreactors”; V.A. Kabanov, A.V. Kabanov, co-advisors.
- 1989 – 1992 Vladimir I. Slepnev, Candidate of Chemical Sciences, RCMDT¹⁴ April 1992 “Modification of proteins for transport of biologically-active compounds into a cell” (*currently CSA & Founder, Curative Labs/ COVID-19 Detection, Cincinnati, OH*) <https://www.linkedin.com/in/vlad-slepnev-05b4b213/>
- 1989 – 1993 Yulia G. Suzdaltseva, Candidate of Biological Sciences¹⁵, RCMDT April 1993 “Effect of artificially hydrophobized antiviral antibodies on reproduction of influenza virus in cell culture”; A.V. Kabanov, O. P. Zhirnov, co-advisors.
- 1990 – 1994 Irina R. Nazarova, Candidate of Chemical Sciences, MSU 1994 “Physico-chemical properties of micelles of block copolymer of polyoxyethylene and polyoxypropylene and their interactions with model membranes”; A.V. Kabanov, A.A. Yaroslavov, co-advisors.
- 1990 – 1996 Tatiana Dorodnykh, Candidate of Chemical Sciences, RCMDT 1994
- 1997 – 2002 Andrew Nehls, M.S., UNMC¹⁶ (*currently Senior Director of Business Development, Early Phase Clinical Services at QPS, LLC, Omaha, NE*) <https://www.linkedin.com/in/andrew-nehls-2b4508a/>
- 1999 – 2005 Sergey Viacheslavovich Solomatin, Ph.D., UNMC February 2005 “Study of self-assembly and environmental response properties of block ionomer complexes” (*currently VP of Research at Impossible Foods Inc., Sand Hill Foods, Menlo Park, CA*) <https://www.linkedin.com/in/sergey-solomatin-9aa36830/>
- 2001 – 2006 Kyung Taek ("Kevin") Oh, Ph.D., UNMC May 2006 “Environmentally responsive materials based on block-, graft-, and cross-linked copolymers for pharmaceutical applications” (*currently Professor at Chung-Ang University, Seoul, South Korea*)
- 2001 – 2007 Srikanth ("Sri") Sriadibhatla, Ph.D., UNMC February 2007 “Effects of pluronic block copolymers on gene delivery and expression” (*currently Director, Healthcare Investment Group, Ben Franklin Technology Partners of Southeastern Pennsylvania, Philadelphia, PA*) <https://www.linkedin.com/in/srisriadibhatla/>
- 2003 – 2004 Jian Zhu, M.S., UNMC August 2004 “Effect of Pluronic P85 on transgene expression in skeletal muscle and potential use of this agent for antitumor DNA vaccination” (*currently Associate Professor, Department of Pathology, Ohio State University Wexner Medical Center, Columbus, OH*) <https://www.linkedin.com/in/jian-zhu-7740b1a/>
- 2003 – 2007 Pavel Sergeevich Chelushkin, Candidate of Chemical Sciences, MSU May 2007 “Interpolyelectrolyte complexes of amphiphilic ionogenic block copolymers and oppositely charged polyelectrolytes”; A.V. Kabanov, T.A. Lysenko, co-advisors (*currently at Institute of*

¹² Ph.D. equivalent¹³ M.V. Lomonosov Moscow State University¹⁴ All-Russian Research Center of Molecular Diagnostics and Therapy¹⁵ Ph.D. equivalent¹⁶ University of Nebraska Medical Center

Macromolecular Compounds, Russian Academy Sciences, St. Petersburg, Russia).

<https://www.linkedin.com/in/pavel-chelushkin-351ab58/>

- 2004 – 2008 Amit Sharma (not completed)¹⁷ (*Employed as Executive Director, Merck Co., Somerville, NJ*)
<https://www.linkedin.com/in/dr-amit-kumar-sharma/>
- 2004 – 2009 Zagit Z. Gaymalov, Ph.D., UNMC November 2009 “Pluronic block copolymers for non-viral gene delivery” (*S&T Commercialization, Houston, TX*) <https://www.linkedin.com/in/zagit/>
- 2005 – 2009 Gaurav Sahay, Ph.D., UNMC October 2009 “Mechanism(s) of endocytosis for cellular entry of nanomaterials” (*currently Associate Professor at Oregon State University, Portland, OR*)
<https://www.linkedin.com/in/gaurav-sahay-09454b8/>
- 2005 – 2010 Xiang Yi, Ph.D., UNMC November 2010 “Protein modification by Pluronic block copolymer for brain delivery” (*currently Senior Scientist at Amgen, San Francisco, CA*)
<https://www.linkedin.com/in/xiang-yi-1279568/>
- 2006 – 2010 Natalia Nukolova, Candidate of Chemical Sciences, MSU November 2010 “Modified polymer nanogels: Synthesis, properties and application” (*currently Director, Formulation, Selecta Biosciences, Greater Boston, MA*) <https://www.linkedin.com/in/natalia-nukolova-96771b9/>
- 2006 – 2012 Daria (Dasha) Y. Alakhova (Filonov), Ph.D., UNMC July 2012 “Mechanistic study of interaction of pluronic block copolymers in drug resistant and cancer initiating cells” (*currently Creative Scientist, Inc., RTP, NC*) <https://www.linkedin.com/in/daria-filonov-702a8557/>
- 2007 – 2008 Michele Gasko (not completed)
- 2007 Dasha Kovaleva (not completed)
- 2007 – 2013 Anna Brynskikh, Ph.D., UNMC February 2013 “Block ionomer complexes of antioxidant enzymes (Nanozymes) as therapeutics for neurologic disorders” (*currently medical publications expert, Omaha, NE*) <https://www.linkedin.com/in/annabrynskikh/>
- 2008 – 2013 Yi Zhao, Ph.D., UNMC September 2013 “Amphiphilic block copolymers for enhancing Doxorubicin and Doxil based chemotherapy by sensitizing cancer stem cells and promoting drug release within tumors” (*currently Senior Scientist, Takara Bio USA, Inc., Palo Alta, CA*)
<https://www.linkedin.com/in/yizhao1028/>
- 2009 – 2013 Jing Tong, Ph.D., UNMC January 2013 “Poly(2-oxazoline) as a polymer carrier for cellular and brain delivery of therapeutic proteins and fullerene” (*currently Senior Director, Shanghai Junshi Biosciences Co., Ltd., Suzhou City, Jiangsu, China*) <https://www.linkedin.com/in/jing-tong-7b3a448/>
- 2009 – 2014 Philise Williams, Ph.D. UNMC November 2014 “Remote actuation of magnetic nanoparticles in breast cancer cells” (*currently M.D. at Howard University*) <https://www.linkedin.com/in/philise-williams-a69893158/>
- 2009 – 2010 Marc Ueda (not completed)
- 2010 – 2012 Maxim Abakumov, Candidate of Chemical Sciences, MSU May 2012 “Systems for targeted visualization of gliomas based on iron nanoparticles”, V.P. Chekhonin, A.V. Kabanov, co-advisors (*currently Associate Professor at Russian State Medical University, Moscow, Russia*)
- 2010 – 2013 Poornima Suresh, M.S., UNMC ““Nanozymes” for the delivery of Superoxide dismutase 1 to the brain” (*currently Freelance editor & writer, Pune, India*)
<https://www.linkedin.com/in/poornimasuresh/>
- 2010 – 2015 Zhijian (Jimmy) He, PhD., UNC January 2015, “Poly(2-oxazoline)s as new drug delivery systems” (*currently Associate Director, Clinical and Quantitative Pharmacology, AstraZeneca, Gaithersburg, MD*) <https://www.linkedin.com/in/jimmy-he-phd-38ab0138/>

¹⁷ Switched to 2009 MBA candidate, Owen Graduate School of Management, Vanderbilt University.

- 2010 – 2015 Vivek Mahajan, Ph.D., UNMC May 2015, “Role of macrophages in muscle transfection with pDNA/Pluronic formulation” (*currently Associate Director, In Vivo Pharmacology, Oncology, GSK, Collegeville, PA*) <https://www.linkedin.com/in/vivekoncology/>
- 2010 – 2016 Hemant M. Vishwasrao, Ph.D., UNMC January 2016 “Block copolymer based magnetic nanoclusters for cancer-theranostics: synthesis, characterization and *in vitro* evaluation” (*currently Principal Scientist, Product Development, Vistagen, Morrisville, NC*) <https://www.linkedin.com/in/nanoformulator/>
- 2011 – 2016 Yuhang Jiang, Ph.D., UNC October 2016 “Block ionomer complex formulations for *in vivo* protein delivery” (*currently Associate Director, Suzhou Abogen Biosciences, Jiangsu, China*) <https://www.linkedin.com/in/jiangyuhang/>
- 2011 – 2017 Dongfen Yuan, Ph.D., UNC April 2017 “Delivery of therapeutic proteins to the brain” (*currently Senior Scientist, Clinical pharmacology and pharmacometrics, Johnson & Johnson, Durham, NC*) <https://www.linkedin.com/in/dongfenyuan/>
- 2011 – 2018 Xiaomeng Wan, UNC Jan 2018 “Poly(2-oxazoline) micellar formulation for cancer therapy” <https://www.linkedin.com/in/xiaomeng-wan-unc/>
- 2011 – 2019 Youngee Seo, Ph.D., UNC October 2019 “Development of Poly (2-Oxazoline)s-Based Nanoferragels” (*currently postdoctoral ORISE fellow at Center for Drug Evaluation and Research (CDER), Food and Drug Administration (FDA)*) <https://www.linkedin.com/in/youngee-seo-8637b077/>
- 2013 – 2019 Ksenia Vlasova, Candidate of Chemical Sciences, MSU October 29, 2019 “Magnetic Nanosystems for Controlled Release of Drugs Under Low Frequency Alternating Magnetic Field: Development and Study of Properties”, A.V. Kabanov, N.L. Klyachko, co-advisors (*currently postdoc at Oregon State University, Portland, OR*)
- 2015 – 2020 Duhyeong Hwang Ph.D., UNC March 2020 “Poly(2-Oxazoline)-Based Polymeric Micelle Platform for Drug Delivery” (*currently Assistant Professor in Department of Pharmaceutical Engineering at Dankook University, Cheonan, South Chungcheong, South Korea*) <https://www.linkedin.com/in/duhyeong-hwang-66a4a3a9/>
- 2015 – 2022 Jimmy Fay, Ph.D., UNC July 2022 “The Nanoformulation of Brain Derived Neurotrophic Factor and Reformulation with PEG-free Polymers” (*TBD*) <https://www.linkedin.com/in/jfay/>
- 2016 – 2021 Natasha Vinod, Ph.D., UNC September 2021 “High-Capacity Poly(2-Oxazoline) Nanofomulations for Reprogramming Tumor Microenvironment” (*currently Visiting Fellow, National Cancer Institute, Bethesda, MD*) <https://www.linkedin.com/in/natashavinod9392/>
- 2016 – 2022 Dina Yamaleyeva, Ph.D., UNC April 2022 “Poly(2-Oxazoline)-Based (POx) Platform for Gene Delivery” (*currently Application Scientist, Miltenyi Biotec, San Diego, CA*) <https://www.linkedin.com/in/dinayamaleyeva/>
- 2018 Ali Altinchi (changed lab and direction), UNC
- 2019 – Jacob Ramsey, UNC, NCI F99/K00 Fellow (2022-) <https://www.linkedin.com/in/jacob-ramsey-b6532ba3/>
- 2019 – Maxim Veselov, MSU
- 2019 – 2022 Anton Lopukhov, Candidate of Chemical Sciences, MSU June 28, 2022 “Development of Lectin-Receptor Targeted System for Delivery of Biologically Active Molecules” (*currently y Scientist, MSU*) <https://www.linkedin.com/in/anton-lopukhov-337272121/>
- 2022 – Alyssa Holden, UNC <https://www.linkedin.com/in/alyssa-holden-463293191/>
- 2023 – Liubov Palchak, UNC <https://www.linkedin.com/in/liubov-palchak-a2080424a/>
- Total 45 36 defended, 4 in-training, 5 not completed, 18 women and URM defended or in training**

Undergraduate visiting/summer students:

1997	Timothy Cherry, Cornell University, U.S.A.
1998	Alexei Popov, Moscow State University, Russia
1998	Sergey Solomatin, Moscow State University, Russia
1998-1999	Mikhail Kozlov, Moscow State University, Russia
1999	Patrick Halpin, University of Sherbrooke, Canada
1999-2000	Milena Otdelnova, Moscow State University, Russia
2000	Steve Stroeger, UNMC College of Pharmacy, U.S.A.
2001	Kimi Ueda, UNMC College of Pharmacy, U.S.A.
2001	Brent J. Night, Creighton University, U.S.A.
2004, 2005	Daria (Dasha) Y. Alakhova, Moscow State University, Russia

Visiting graduate students:

2008	Matteo Gazzarri, Ph.D. candidate, University of Pisa, Italy
2008, 2009	Anita Schulz, Ph.D. candidate, Technical University of Munich, Germany
2009	Morten Østergaard Andersen, Ph.D. candidate, Aarhus University, Denmark
2010, 2012	Anita Schulz, Ph.D. candidate, Technical University Dresden, Germany
2012	Herdis Bludau, M.S. candidate, Technical University Dresden, Germany
2012	Corinna Fetsch, M.S. candidate, Technical University Dresden, Germany
2016	Sarah Naumann, M.S. candidate, Technical University Dresden, Germany
2017	Dan Gieseler, Ph.D. candidate, Technical University Dresden, Germany
2021	Yuseon Shin, Ph.D. candidate, Chung-Ang University, S. Korea
2022	Nikola Mannova, Ph.D. candidate, University of Pardubice, Czech Republic

Postdoctoral trainees, research fellows/associates and visiting scientists:#**RCMDT**

1988 – 1991	Irina Astafieva, Ph.D., Junior Scientist (<i>Currently Analytical CMC Quality Leader at Genentech, Palo Alto, CA</i>) https://www.linkedin.com/in/irina-astafieva-phd-7321385/
1988 – 1993	Nikolai Melik Nubarov, Ph.D., Senior Scientist (currently at MSU, Moscow, Russia)
1988 – 1993	Elena Batrakova, Ph.D., Senior Scientist
1988-1993	Sergey Vinogradov, Ph.D., Leading Scientist

UNMC

1994 – 1997	Sergey Vinogradov, Ph.D., Visiting scientist
1995 – 2003	Elena Batrakova, Ph.D., Research Associate
1995 – 1997	Tatiana Bronich, Ph.D., Postdoctoral Research Assistant

- 1997 – 1998 Hong Khanh Nguyen, Ph.D. Postdoctoral Research Assistant (*currently Industrial Property Manager at Horiba Medical, Montpellier, France*) <https://www.linkedin.com/in/hong-khanh-nguyen-615347a/>
- 1997 – 2009 Eugenie Lysenko, Ph.D., Visiting Scientist (currently at MSU, Moscow, Russia)
- 1998 – 2000 Catherine Gebhart, Ph.D., Postdoctoral Research Assistant, Research Associate (*currently Immunology Laboratory Director, LifeLink Foundation. Tampa, FL*) <https://www.linkedin.com/in/catherine-gebhart-8626827/>
- 2004 – 2005 Li Zhang, Ph.D., Postdoctoral Research Assistant
- 2004 – 2007 Zhihui Yang, M.D., Research Associate
- 2004 – 2008 Xiaobin Zhang, Ph.D., Postdoctoral Research Assistant (*Employed as Principal Scientist, Takeda, Lexington, MA*) <https://www.linkedin.com/in/xiaobin-zhang-b1424914/>
- 2005 – 2008 Yuan Li, Ph.D., Postdoctoral Research Assistant
- 2008 Tatiana Panova, Ph.D., Visiting Scientist
- 2007 – 2008 Robert Luxenhofer, Ph.D., Visiting Scientist, Postdoctoral Research Assistant (*currently Professor for Soft Matter Chemistry, Department of Chemistry, University of Helsinki, Bestätigte, Finland*) <https://www.linkedin.com/in/robert-luxenhofer-9bb5b521a/>
- 2008 – 2010 Carolyne Roques, Ph.D., Postdoctoral Research Assistant, Research Associate (*currently Associate Professor, Faculty of Pharmacy, Paris Descartes University: Paris, France*).
- 2008 – 2010 Zigang Yang, Ph.D., Postdoctoral Research Assistant (*Employed as Principal Scientist, Axalta Coating Systems, Yangpu District, Shanghai, China*) <https://www.linkedin.com/in/zigang-yang-75068096/>
- 2008 – 2012 Devika Manickam, Ph.D., Postdoctoral Research Assistant, Research Instructor, Leader, Biopolymer Nanoformulations Group (*Employed as Assistant Professor, Duquesne University School of Pharmacy*) <https://www.linkedin.com/in/devika-s-manickam-97275516/>
- 2008 – 2009 Wenguang Zhang, M.D., Research Instructor
- 2009 – 2012 Svetlana Romanova, Ph.D., Postdoctoral Research Assistant <https://www.linkedin.com/in/svetlana-romanova-592baa32/>
- 2009 – 2012 Marina Sokolsky, Ph.D., Postdoctoral Research Assistant, Research Associate, Leader, Magnetic Nanomaterials Group
- 2010 – 2012 Zaguit Gaimalov, Ph.D., Research Manager and Deputy Director of CDDN for Translational Research
- 2009– 2012 Shaheen Ahmed, Ph.D., Postdoctoral Research Assistant (*Employed as Scientist II at ReCode Therapeutics, Inc., Santa Clara, CA*) <https://www.linkedin.com/in/shaheen-ahmed-6365a3105/>
- 2010 – 2012 Yingchao Han, Ph.D., Postdoctoral Research Assistant
- 2010 – 2012 Xiang Yi, Ph.D., Postdoctoral Research Assistant, Leader, Protein Therapeutics Group

UNC-Chapel Hill

- 2012 – 2014 Alexander Piroyan, Postdoctoral Research Assistant (currently industry)
- 2013 – 2014 Jing Gao, Postdoctoral Research Assistant (currently industry)
- 2014 – 2016 Alyssa Master, Postdoctoral Research Assistant (*Employed as Senior Vice President of Operations at Nucleus Biologics, San Diego County, CA*) <https://www.linkedin.com/in/alyssamaster/>

- 2015 – 2019 Elizabeth Wayne, T32 Postdoctoral Research Assistant (*Employed as Assistant Professor, Biomedical Engineering and Chemical Engineering, Carnegie Mellon University*)
<https://www.linkedin.com/in/lizwayne/>
- 2016 – 2017 Si Qin, Research Associate
- 2016 – 2018 Mingzhen Zhang, Research Associate
- 2016 – 2021 Lida Ghazanfari, T32 Postdoctoral Research Assistant (currently Associate Director- in vitro services (Immunology), Charles River Laboratories, NC)
<https://www.linkedin.com/in/lghazanfari/>
- 2017 Yusuf Kemal Demir, Research Associate
- 2017 – 2022 Chaemin Lim, Postdoctoral Research Associate (currently Research Assistant Professor, College of Pharmacy, Chung-Ang University, Seoul, Korea)
<https://www.linkedin.com/in/chaemin-lim-12072313b/>
- 2018 – 2019 Juan Beltran Huarac, T32 Postdoctoral Research Assistant (currently Assistant Professor in the Department of Physics, East Carolina University) <https://www.linkedin.com/in/juan-beltran-huarac-4ab69046/>
- 2017 – 2019 Naoki Makita, Visiting Scientist (currently industry)
- 2018 – 2019 Ryo Kojima, Visiting Scientist (currently industry)
- 2020 – Mohamed Fathy Attia, NCI T32 Postdoctoral Research Assistant
- 2021 – Edikan Archibong Ogunnaike, NINDS K99 Fellow
- 2022 – Kyoungtea Kim, Research Associate
- 2023 – Son Long Ho, NCI T32 Postdoctoral Research Assistant

Total 39 36 completed, 3 in-training, 21 women and URM

‡ Not including scientists supervised at MSU (2010-)

Senior group members and visiting scientists:

UNMC

- 2003-2012 Elena Batrakova, Ph.D., Research Assistant Professor (*currently Associate Professor, UNC-Chapel Hill*) <https://www.linkedin.com/in/elena-batrakova-64058254/>
- 1997-2012 Tatiana Bronich, Ph.D., Research Assistant/Associate Professor (*currently Associate Dean, Bouvé College of Health Sciences; Dean, School of Pharmacy and Pharmaceutical Sciences; Professor, Department of Pharmaceutical Science, Northeastern University, Boston, MA*).
<https://www.linkedin.com/in/tatiana-bronich-b790999/>
- 1997-2012 Sergey Vinogradov, Ph.D., Research Assistant Professor (*Retired as Research Professor, UNMC*).
- 2004-2008 Joseph A. Vetro, Ph.D., Research Assistant Professor, Assistant Professor (*currently Associate Professor at UNMC*) <https://www.linkedin.com/in/josephvetro/>
- 2007-2008 Motoi Oishi, Ph.D., Visiting Assistant Professor
- 2008-2012 Natalia Klyachko, Ph.D., Professor, MSU, Visiting Professor, UNMC

Moscow State University

2010-2014 Alexander Majouga, Ph.D., DSc. Senior research associate (*currently Deputy of the State Duma of the Russian Federation and First Deputy Chairman of the Duma Committee on Science and Higher Education, immediate former position - Rector of the Mendeleev University of Chemical Technology, Moscow, Russia*)

UNC-Chapel Hill

2012-2015 Devika Manickam, Ph.D., Research Assistant Professor (*currently Associate Professor at Duquesne University*) <https://www.linkedin.com/in/devika-s-manickam-97275516/>

2012- Marina Sokolsky-Papkov, Ph.D., Research Assistant Professor, Research Associate Professor, <https://www.linkedin.com/in/marina-sokolsky-papkov-462ab416/>

2012-2015 Xiang Yi, Ph.D., Research Assistant Professor

2012- Natalia Klyachko, Ph.D., Professor, MSU, Visiting Professor, UNC, Professor and Chair, Department of Chemical Enzymology, Faculty of Chemistry, MSU

2017-2019 Elena Batrakova, Research Associate Professor

2018-2020 Ayelet David, Visiting Professor, UNC, Associate Professor, Ben Gurion University, Visiting Scientist, UNC

Other mentored faculty¹⁸:

2008-2012* Joseph A. Vetro, Ph.D., Assistant Professor, College of Pharmacy, UNMC

2005-2007* Dong Wang, Ph.D., Assistant Professor, College of Pharmacy, UNMC

2018- Yevgeny Brudno, Ph.D., Assistant Professor, Joint Department of Biomedical Engineering, UNC and North Carolina State University

2018- Edward Moreira Bahnson, Ph.D., Assistant Professor, Department of Cell Biology & Physiology, Center for Nanotechnology in Drug Delivery, UNC

* Indicates obtaining major research funding (e.g., NIH RO1) as independent principal investigator for mentored.

Research Technologists/specialists:

1998-2014 Shu Li, Research Technician, Research Technologist

2002-2004 Yi Li Li, Research Technician

2008 Stacey Tatman, Research Technician

2008-2010 Yudong Li, Research Technician

2008-2010 Sheila M Higginbotham, Research Technician

2012- Matt Haney, Research Specialist

2016- Yuling Zhao, Research Specialist

2016-2017 Kevin Day, Research Specialist

2017-2020 Camille Mayanga Kapita

2017-2019 Jacob Ramsey

¹⁸ Position of mentees is shown as of time of training.

3-Mar-23

A.V. Kabanov

2017-2020 Olesia Gololobova

RESEARCH SUPPORT:**A. Combined past and current support (since October 1994)***

Role	Direct Cost US \$						Total Direct & Indirect Costs US \$
	NIH	NSF	Other Federal	Industry [#]	Other sources ^{&}	Total	
PI	27,322,672	1,354,612	5,783,245	1,367,533	13,074,960	48,903,022	61,312,889
Co-PI	9,716,763	-0-	7,668,613	-0-	37,051,701	47,959,377	60,502,519
Total	37,039,435	1,354,612	13,451,858	1,367,533	42,129,920	95,473,639	121,815,408

* Not including grants consulted or support received in the Soviet Union/Russia before 1994.

& Including grants received from foreign sources, not including university start-up and other seed funds.

Not including funding raised and/or spent outside of academic institutions by private entities.

B. Listing of grants**Current/Active:**

- mRNA Immunoadjuvants for mRNA vaccines, Bill and Melinda Gates Foundation, subcontract with FlagBio, 11/01/22 - 12/31/23, \$100,000, A. Kabanov (PI)
- Drug Retention and Tumor Distribution of Polymeric Micelles for Cancer Therapy, NIH/NCI F99CA274702, 08/01/2022 – 07/31/2024, \$78,044, J. Ramsey (PI), A. Kabanov (Mentor)
- Fibrin-CAR-T cells therapies to enhance efficacy in glioblastoma treatments, NIH/NINDS K99NS128716, 09/01/2022 – 08/31/2024, \$231,006, Edikan Ogunnaike (PI), A. Kabanov (Mentor)
- Towards translation of Nanoformulated Paclitaxel-Platinum Combination, NIH/NCI R01 CA264488, 08/01/21 – 06/31/25, \$2,452,236, A. Kabanov (PI)
 - Diversity Supplement - Towards translation of Nanoformulated Paclitaxel-Platinum Combination, \$411,093, 03/01/22 - 07/31/25 (Relinquished 08/31/2022 as a result of MOSAIC K99 Funding to Edikan Ogunnaike)
- Carolina Cancer Nanotechnology Training Program (C-CNTP), NIH/NCI, 1T32CA196589-06, 07/01/15 - 6/30/25, \$2,391,996 (current), \$4,224,766 (cumulative), A. Kabanov (PI)
- UNC - Sumitomo Collaboration, Sumitomo Dainippon Pharma, 06/01/20 – 05/31/22, A. Kabanov (PI)
- Extracellular Vesicles for CNS Delivery of Therapeutic Enzymes to Treat Lysosomal Storage Disorders NIH, R01NS112019, 09/01/19 - 06/30/24, E. Batrakova, (PI) A. Kabanov (Co-I)
- Cell-based Platform for Gene Delivery to the Brain. NIH 1R01NS102412, 03/1/18 – 11/30/23 (NCE), E. Batrakova, (PI) A. Kabanov (Co-I)

Completed:¹⁹

- Tunable synthetic polymeric scavengers for toxic xenobiotics, Russian Science Foundation, \$300,000 20-63-46034, 09/01/20 – 12/31/22, A. Kabanov (PI – **resigned as PI starting Jan 1, 2022**).

¹⁹ Dr. Kabanov had obtained successfully funds necessary to conduct his research in Russia before October 1994 through grants and contracts. This section presents only the research projects funded since his appointment in the United States.

- Liposomal Doxorubicin and Pluronic Combination for Cancer Therapy, NIH NCI, R01CA184088, 01/01/15 – 12/31/21 (NCE); \$1,561,245 (\$1,037,500), A. Kabanov (PI), W. Zamboni (CPI).
- Innovative Research in Cancer Nanotechnology (IRCN): Targeted Core Shell Nanogels for Triple Negative Breast Cancer, NIH/NCI, U01CA198910-01, 8/14/15-7/31/2021 (NCE), \$2,877,710, A. Kabanov (PI) T. Bronich & R. Liu (CPIs)
- Carolina Center for Cancer Nanotechnology Excellence (C-CCNE): Nano Approaches to Modulate Host Cell Response for Cancer Therapy; Project 4: High-Capacity Polymeric Micelle Therapeutics for Lung Cancer, NIH NCI, 1U54CA198999-01, 09/15/15-07/31/21 (NCE), \$11,309,680 (total CCNE) {\$2,261,936 (\$1,494,991)²⁰ Project 4}, L. Huang (PI) J. Tepper (CPI), A. Kabanov (PI, Project 4).
- Nanoparticle Delivery of Cas9 and Therapeutic gRNAs to the Brain, Tier 2, 06/01/18 – 5/31/20, \$200,000, A.V. Kabanov (PI), M. Zylka (CPI).
- Targeted Magneto-Mechanic Nanotherapeutics for Cancer, NIH NCI, 1R21CA220148, 08/01/17 - 07/31/20, \$352,401 A.V. Kabanov (PI)
- Brain Drug Delivery: Optimizing miR-29 Nanoformulation for Neuroprotection, Tier 1, 06/01/18 – 5/31/19, \$49,999, A.V. Kabanov (PI), M.P. Deshmukh (CPI).
- Systemic Targeting of Mononuclear Phagocytes for Parkinson's Disease Gene Therapy, Eshelman Institute for Innovation, Tier 3, 06/01/17 – 5/31/20, \$375,000, A.V. Kabanov (PI), E.V. Batrakova (CPI).
- Magneto-Mechanical Cancer Nanotherapeutics, Eshelman Institute for Innovation, Tier 2, 06/01/16 – 5/31/18, \$199,877, A.V. Kabanov (PI).
- Nasal Leptin - Polymer Conjugate for Treatment of Obesity, NIH NIDDK, STTR, 1R41DK108466, 8/01/16-7/31/17, \$215,843, A.V. Kabanov (PI), S. Farr (CI).
- Center for RNA Therapeutics and Biology, SkolTech Center for Research Education and Innovation (CREI), Skolkovo Foundation, 01/01/14 – 12/31/18, \$39,983,701, D. Anderson (PI non-Russian Institution/Center Co-Director), A.V. Kabanov (PI Russian Institution/Center Co-Director), V. Kotelianski (SkolTech Center Director), P. Sharp, R. Langer, O. Dontsova, N. Klyachko, V. Chekhonin, M. Gelfand, T. Jacks, J. Horton, J. Goldstein, M. Brown, (CIs).
- PRINT Butyrylcholinesterase (BuChE) Delivery, DTRA/DoD HDTRA1-09-14-FRCWMD-BAA, Thrust Area 3, Topic C: Nanostructured Active Therapeutic Vehicles (NATV), 07/01/2013-02/02/2018 \$4,900,000 (\$3,300,000) [\$304,000 (\$200,000)], J. DeSimone (PI), A. Kabanov (CPI).
- Nanoformulated Brain Derived Neurotrophic Factor (BDNF) for the Treatment of Rett Syndrome, Rettsyndrome.org, HeART Award #3112; 01/01/15 -12/31/16 \$149,384.00, A. Kabanov (PI), J. Neul (CI).
- Carolina Nanoformulation Workshop, Eshelman Institute for Innovation, Tier 1, 07/01/15 – 3/31/16, \$50,000.
- RECOPE: Reverse Conceptual Product Engineering, Eshelman Institute for Innovation, Tier 1, 07/01/15 – 3/31/16, \$50,000.
- Use of Autologous Macrophages for Sustained Delivery of GDNF as Treatment of Parkinson's Disease, NC Biotechnology Center; 07/01/15 – 3/31/16, \$50,000, M. Law (PI), E. Batrakova, A. Kabanov (Co-Is).
- Nanoformulation of the BDNF for the Treatment of Stroke, NIH/NINDS, 1R21NS088152-01A1, \$ 783,363, 07/01/15 - 6/30/17, A. Kabanov (PI)
- High Capacity Nanocarriers for Cancer Chemotherapeutics, NIH NCI, UO1 CA151806, 9/02/10-7/31/15, \$ 2,208,752 (\$ 1,685,918), A.V. Kabanov (PI), H. Band, T.K. Bronich, R. Jordan, R. Luxenhofer, S. Raja (CI).

²⁰ Unless it is stated different the total cost and direct cost (in brackets) are presented.

- Polypeptide Modification for Enhanced Brain Delivery, NIH NINDS, R01 NS051334, 5/05/10-3/31/16 (no cost extension), \$ 1,870,852 (\$ 1,586,782), A.V. Kabanov (PI), W. Banks (CPI), E.V. Batrakova, S.V. Vinogradov (CIs).
- delAQUA - Computer-assisted Drug Solubilization Platform, NC TraCS 4DR11404; 12/01/14 – 11/30/15; \$50,000 (direct); A. Kabanov (PI), A. Tropsha (CPI).
- Pegylated Liposomal Doxorubicin (PLD) in Combination with Pluronic for Treatment of Cancers 1, NIH/NCI – Alliance Challenge Project U54 CA151652, 07/01/13-06/30/14, J. DeSimone, Challenge project CPIs: W. Zamboni, A. Kabanov
- Evaluation of Antitumor Efficacy and Toxicity of Liposomal Doxorubicin (Doxil) in Combination with Pluronic Compositions in Vivo Tumor models of Breast and Ovarian Cancers, NIH/NCI – Alliance Challenge Project, Texas Center for Cancer Nanomedicine, 07/01/13-06/30/14, Challenge project CPI: G. Lopez-Berestein, A. Kabanov, W. Zamboni, B. Ozpolat.
- Triangle Center for Excellence for Materials Research and Innovation: Programmable Assembly of Soft Matter, Seed Project: “Ferrogels for remote diagnostics and therapy”, 9/1/2013-8/31/2014, \$59,653 (\$42,999), G. Lopez (PI MSERC), A. Kabanov (PI Seed).
- INNS: Integrated Neuroprotective and Neuroregenerative Strategies, DoD, W81XWH-11-1-0700, 08/29/11- 08/28/14, \$4,195,000 (\$2,800,000) {\$1,700,000 (\$1,144,782)}²¹, S. Mallapragada (PI), A.V. Kabanov (CPI, consultant after reallocation to UNC on 08.12), T.K. Bronich (CPI after 08.12), H. Gendelman (CPI).
- NanoART Manufacture, Delivery and Pharmacokinetics for Optimizing Drug Adherence, Project 1, NIH/NIDA, 1P01 DA028555-01A1, 07/15/10-04/30/15, \$4,905,704 (\$3,314,665) [Project 1 \$546,000 (\$368,500)], H. Gendelman (PO1 PI), A.V. Kabanov (Project 1 PI, consultant, EAC member, after reallocation to UNC on 08.12).
- Chemical Design of Bionanomaterials for Medical Applications, Government of Russian Federation, Ministry of Education and Science of Russian Federation, 11.G34.31.0004, 11/01/10-12/31/12, Rub 135,000,000 {= approx. \$ 4,500,000 to Moscow State University}, A.V. Kabanov (PI). Competitively renewed, 01/01/12-12/31/14 Rub 57,000,000 {approx. \$ 1,893,000, Moscow State University}.
- Targeted Nanovaccines Against Respiratory Pathogens (TANARP), DoD Award No. W81XWH-10-1-0806, 9/01/10 - 8/31/13, \$3,502,000 (\$ 2,913,395) [\$850,000 (\$572,391)]²², S. Mallapragada (PI), A.V. Kabanov (CPI, consultant after reallocation to UNC on 08.12), T.K. Bronich (CPI after 08.12), S. Hinrichs, B. Narasimhan, and M.J. Wannemuehler (CIs).
- Synthetic Nanovaccines Against Respiratory Pathogens (SYNARP), DoD Award No. W81XWH-09-1-0386; Log No. 08141006, 7/01/09 - 6/30/13, \$3,394,000 (\$ 2,913,395), A.V. Kabanov (PI, CI after reallocation to UNC on 08.12), T.K. Bronich (PI after 08.12), S. Hinrichs, S. Mallapragada, B. Narasimhan, and M.J. Wannemuehler (CIs).
- Nebraska Center for Nanomedicine, NIH COBRE P20GM103480 (originally 1P20RR021937) 09/26/08-06/30/13, \$ 10,660,000 (\$ 7,500,000), A.V. Kabanov (PI, consultant after reallocation to UNC on 08.12), T.K. Bronich (PI after 08.12).
- Polymer Micelles and Polycomplexes of Biomacromolecules as Functional Bionanomaterials, Ministry of Education and Science of Russian Federation, 02.740.11.5231, 7/01/10-6/31/12, Rub. 2,800,000 {approx. \$ 93,300, to Moscow State University}, A.V. Kabanov (PI).
- Interactions of Pluronic Block Copolymers in Drug Resistant Cancer, NIH NCI, 2R01 CA89225, 5/01/07-4/30/12, \$ 1,223,277 (\$ 860,343), A.V. Kabanov (PI), J. Riffle (CI).
- Non-invasive Nanodiagnostics of Cancer (NINOC), 4/01/07-03/31/10, DoD USAMRMC 06108004, \$ 1,760,000 (\$ 1,525,068). A.V. Kabanov (PI), S. Batra, M. Boska, T.K. Bronich (CIs).

²¹ UNMC subcontract.

²² UNMC subcontract.

- Polymer Based Gene Delivery, NIH NCI 1 R01 CA116591, 5/01/06 – 4/30/11, \$ 1,365,258 (\$ 1,006,513), A.V. Kabanov (PI), Jedd Wolchok (CI).
- Polypeptide Modification for Enhanced Brain Delivery, NIH NINDS, RO1 NS051334, 2/15/06 - 1/31/10, \$ 933,955 (\$ 761,524), A.V. Kabanov (PI), W. Banks, S.V. Vinogradov (CIs).
- InnovaForm Technologies, LLC, Philadelphia, PA, Nebraska research component, Nov. 2005 to Dec. 2009, \$700,000 (UNMC Lab. only), A.V. Kabanov (Chief Science Officer).
- Interactions of Block Copolymers in Blood Brain Barrier, NIH NINDS, RO1 NS36229-09, 9/01/02 - 7/30/09, \$ 1,745,625 (\$ 1,187,500), A.V. Kabanov (PI), W.F. Elmquist, D.W. Miller, Y. Persidsky (CIs).
- Structure and Dynamics of Block Ionomer Complexes, NSF DMR 0513699, 6/01/05-5/31/08, \$ 345,000 (\$ 233,900) A.V. Kabanov (PI), T.K. Bronich (CI).
- Sixth International Nanomedicine and Drug Delivery Symposium, NIH 1R13EB009301-01, November 18-19, 2008, \$ 10,000, A.V. Kabanov (PI).
- Seed Program in Nanotechnology for Pancreatic Cancer, UNMC-ISU, July 2006 to June 2008, \$ 100,000, A.V. Kabanov (PI-UNMC), S. Mallapragada (PI-ISU).
- Retention fund, UNMC/State of Nebraska Tobacco settlement funds, July 2004 to June 2008, \$ 600,000, A.V. Kabanov (PI).
- Interactions of Pluronic Block Copolymers in Drug Resistant Cancer, NIH NCI, RO1 CA89225-05, July 2001 to June 2006, \$ 887,091 (\$ 664,000), A.V. Kabanov (PI), B. Leyland-Jones (CI).
- Interactions of Pluronic Block Copolymers in Drug Resistant Cancer, UNMC Eppley Cancer Center bridge support, Nov. 2005 to Feb. 2007, \$ 50,000, A.V. Kabanov (PI).
- Fourth International Nanomedicine and Drug Delivery Symposium, NIH 1R13EB006720-01, October 8-10, 2006, \$ 13,000, A.V. Kabanov (PI).
- Third International Nanomedicine and Drug Delivery Symposium, NIH 1R13EB005534-01, October 8-10, 2005, \$ 10,000, H. Ghandehari (PI), A.V. Kabanov (CI).
- Synthesis and Characterization of Carriers for Gene and Drug Delivery, Supratek Pharma Inc., July 1997 to June 2006, \$ 600,000 (\$ 492,000), A.V. Kabanov (PI).
- Complexes of Block Ionomers with Oppositely Charged Surfactants, NSF DMR-0071682, Special Creativity Extension, June 2003 to May 2005, \$ 196,000 (\$ 133,333), A.V. Kabanov (PI).
- Enhancement of T Cell Responses Against Survivin, NIH RO1 CA84106 (supplement), Aug. 2002 to July 2004, \$ 350,400 (\$ 240,000), S. Sherman (PI), A.V. Kabanov and D. Gabrilovich (CI).
- Gene Therapy Program, Nebraska Research Initiative, July 1988 to July 2004, Direct cost award amount \$ 1,418,000 [Kabanov's group portion \$ 350,000], P.-W. Cheng (PI), J. Talmadge, A.V. Kabanov, V. Labhasetwar (CIs).
- Soluble Complexes of DNA with Cationic Polymers for Gene Delivery, NSF BES-9907281, June 2000 to May 2004, \$ 349,524 (\$ 239,400), A.V. Kabanov (PI).
- Complexes of Block Ionomers with Oppositely Charged Surfactants, NSF DMR-0071682, June 2000 to May 2003, \$ 262,800 (\$ 180,000), A.V. Kabanov (PI).
- International Collaboration: Complexes of Block Ionomers with Oppositely Charged Homopolymers and Surfactants, NSF DMR-9617837, Feb. 1997 to Jan. 2002, \$ 40,780 (\$ 38,250), A.V. Kabanov (PI).
- Dispersed Cationic Networks (Nanogels) as Carriers for Drug Delivery, NSF BES-9986393, Jan. 2000 to Dec. 2001, \$ 100,000 (\$ 68,494), A.V. Kabanov (PI), T.K. Bronich (CPI).
- Interactions of Block Copolymers in Blood Brain Barrier, NIH RO1 NS36229, Sep.1997 to July 2001, \$ 516,605 (\$ 353,839), A.V. Kabanov (PI), W.F. Elmquist, D.W. Miller (CIs).

- Star Polymer Unimolecular Micelles for Drug Delivery (Phase I), NIH R43 GM62054, July 2000 to Dec. 2000, \$ 99,961 (\$ 52,898), [UNMC subcontract \$ 21,500 (\$17,622)], F. Wang (PI), A.V. Kabanov (CI).
- Water-soluble Block Ionomer Complexes, NSF DMR-9502807 (CAREER Award), June 1995 to May 2000, \$ 312,500 (\$ 281,250), A.V. Kabanov (PI).
- Soluble Complexes of DNA with Cationic Block Copolymers, NSF BES-9712657, Sep. 1997 to Aug. 1999, \$ 200,000 (\$ 136,986), A.V. Kabanov (PI).
- Self-assembly of ETANA Compounds, Emisphere Technologies Inc., June to October 1998, \$ 20,000 (\$ 16,400), A.V. Kabanov (PI)
- Synthesis and Characterization of Block-copolymeric Carriers for Nucleic Acids and Antineoplastic Agents, Supratek Pharma Inc., Apr. 1997 to June 1997, \$ 25,400 (\$ 20,820), A.V. Kabanov (PI)
- Synthesis and Characterization of Block-Copolymeric Carriers for Nucleic Acids and Antineoplastic Agents, Supratek Pharma Inc., Feb. 1996 to Jan. 1997, \$ 55,000 (\$ 45,082), A.V. Kabanov (PI).
- Synthesis and Characterization of Fluoroorganic Block Copolymers, Supratek Pharma Inc., May 1996 to Nov. 1997, \$ 4,950 (\$ 4,090), A.V. Kabanov (PI).
- Synthesis of Polymeric Carrier for Oligonucleotides, Supratek Pharma Inc., Nov. 1994 to Dec. 1994, \$ 4,990 (\$ 4,090), A.V. Kabanov (PI).