CURRICULUM VITAE

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University Distinguished Professor and Director, Center for Pharmaceutical Biotechnology and Nanomedicine, School of Pharmacy, Bouve College of Health Sciences, Northeastern University

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Education:
M.S. in Polymer Chemistry from Moscow State University, Moscow, Russia, 1968
Ph.D. in Chemical Kinetics and Catalysis from Moscow State University, Moscow, Russia, 1971
D.Sc. in Bioorganic Chemistry from Moscow State University, Moscow, Russia, 1980
Since 1985 - Professor in Bioorganic Chemistry, Chemistry of Natural and Physiologically Active Compounds

Academic Appointmens:

1971-1973	Junior Scientist, Moscow State University
1974-1980	Senior Scientist, Academy of Medical Sciences of the USSR
1985-1991	Professor of Biochemistry, Academy of Medical Sciences of the USSR
1989-1991	Professor in Biotechnology, Lomonosov Institute of Fine Chemical Technology, Moscow, USSR
1991	Visiting Professor of Biochemistry, University of Tennessee
1991	Visiting Professor, University of California, San Diego
1993-1999	Associate Professor of Radiology, Harvard Medical School
1998-	Professor of Pharmaceutical Sciences, Northeastern University
1998-2008	Chair, Department of Pharmaceutical Sciences, Northeastern University
2004-	Distinguished Professor of Pharmaceutical Sciences, Northeastern University
2005-	Director, Center for Pharmaceutical Biotechnology and Nanomedicine, Northeastern University
2010-	Director, Center for Translational Cancer Nanomedicine (NIH-funded CCNE)
2012-	University Distinguished Professor

Hospital Appointments:

1974-1980	Senior Researcher, USSR Cardiology Research Center, Moscow
1981-1991	Head, Laboratory of Enzyme Engineering, USSR Cardiology Research Center, Moscow
1985-1991	Professor, Laboratory of Enzyme Engineering, USSR Cardiology Research Center, Moscow
1991-1993	Associate Chemist, Massachusetts General Hospital (MGH), Boston, MA
1993-1998	Head, Chemistry Program, Center for Imaging and Pharmaceutical Research (CIPR), MGH, Boston, MA
1998	Associate Director, CIPR, MGH, Boston, MA

Awards and Honors:

1982	Lenin Prize of the USSR in Science and Technology (the highest

	scientific award in the former USSR)
1978, 82, 85	Exchange Scientist, US/USSR Exchange Prograrn in Cardiovascular
87,89, 90	Research - Myocardial Metabolism
1991	Full member (Academician), Russian Academy of Biotechnology
1994,1993	Outstanding Pharmaceutical Paper Award, Controlled Release Society
1994,1993	Outstanding Paper Award from the *Journal of Controlled Release*
1995-1998	Board of Governors, Controlled Release Society
1999	Co-Chair, 26th International Symposium on Controlled Release of Biologically Active Materials
2001,03,04,07	Creativity Awards from Northeastern University
2002	Co-Chair, Gordon Research Conference on Drug Carriers in Biology and Medicine
2002	Fellow, American Institute for Medical and Biological Engineering
2002	Innovation Award from Northeastern University
2002	Member, European Academy of Sciences
2003	Vice President, Controlled Release Society
2003	Fellow, American Association of Pharmaceutical Scientists (AAPS)
2003	ATOMS Research Excellence in Mentorship Award, National Institute of General Medical Sciences
2004	Distinguished Northeastern University Professor of Pharmaceutical Sciences
2004	Member, Board of Directors, International Liposome Society
2005	President, Controlled Release Society
2005	Research Achievements Award in Pharmaceutics and Drug Delivery, AAPS
2005	The Joy Goodwin Lecturer, Auburn University
2005	Member, Research and Graduate Affairs Committee, AACP
2006	2006 CRS-Baxter Healthcare Outstanding Parenteral Drug Delivery Award
2006	The Massachusetts Technology Transfer Center 2006 Investigation Award
2007	Research Achievements Award from the World Pharmaceutical Congress, Amsterdam
2007	Phi Beta Delta
2007	Chair, International Symposium on Nanomedicine and Drug Delivery Systems
2008	Prestige Lectureship, University of Montreal
2008	The Massachusetts Technology Transfer Center 2008 Investigation Award
2008	Co-Chair, 2008 NCI/NSTI Special Symposium on Nanotechnology for Cancer
2008	Horizons in Nanotechnology Lectureship, Emory University
2008	Key-note speaker, International Conference on NanoBio Technologies, St.Petersburg
2009	Key-note speaker, Indo-US Summit on Cancer Nanotechnology, New Delhi, India
2009	University of North Carolina-Eisai Distinguished Lectureship in Drug Delivery
2009	Key-note speaker, International Symposium on Microencapsulation, Japan
2009	The Meritorius Paper AAPS Journal 2008 Award
2009	Key-note speaker, American Society for Nanomedicine Conference, Potomac
2009	2009 International Journal of Nanomedicine Distinguished Scientist Award
2010	Key-note speaker, Nanomedicine: Visions for the Future, Amsterdam, The Netherlands
2010	Avis Distinguished Visiting Professor Lectureship, University of Tennessee, Memphis
2010	Key-note speaker, International Conference on Biological Barriers, Saarbrucken, Germany
2010	Founders Award, Controlled Release Society
2010	Key-note speaker, 3rd European Conference on Clinical Nanomedicine, Basel, Switzerland
2010	Fellow, Controlled Release Society
2010	Plenary speaker, Advances in Drug Delivery Conference, Aix-en-Provence, France
2011	Key-note Speaker, UKICRS Meeting, Belfast, UK
2011	Excellence in Research and Creative Activity Award, Northeastern University
2011	Chair, Nanotechnology Focus Group, AAPS

2012 University Distinguished Professor, Northeastern University
2012 Alec Bangham Life Achievement Award
2012 Plenary speaker, European Conference and School on Nanomedicine and Nanotoxicology, Crete, Greece
2012 Plenary speaker, Controlled Release Society Annual meeting, Quebec City, Canada
2012 Plenary speaker, Israeli Controlled Release Society Meeting, Israel
2012 Plenary speaker, International Pharmaceutical Technology Conference, Antalya, Turkey
2012 Plenary speaker, Liposome Research Days, Hangzhou, China
2012 Plenary speaker, International Pharmaceutical Technology Conference, Kuala Lumpur, Malaysia
2013 Journal of Drug Targeting Life Time Acheiment Award
2013 Plenary speaker, World Pharma Congress, Philadelphia
2013 Blaise Pascal Medal in Biomedicine from the European Academy of Sciences
2013 Plenary speaker, 19th International Synposium on Microencapsulation, Pamplona, Spain
2013 Plenary speaker, Pharmaceutical Congress, Cape Town, South Africa
2013 Plenary speaker, International Conference on Nanotechnology for Health, Belo Horizonte, Brazil
2014 Co-President and plenary speaker, International Congress on Biomaterials, Greece
2014 Plenary speaker, Drug Discovery and Therapy World Congress, Boston
2015 Co-President and plenary speaker, International Congress on Biomaterials, Greece
2015 Plenary speaker, International Conference on Pharmaceutical Technology, Istanbul, Turkey
2015 Chair, XX International Symposium on Microencapsulation, Boston
2015 European Journal of Pharmaceutics and Biopharmaceutics best paper award for 2014
2016 Co-President and plenary speaker, BIONANOTOX, Greece
2016 International Chair of Therapeutic Innovation, LabEx LERMIT, France
2016 Highly Cited Researcher from Thomson Reuters
2017 Outstanding Excellence Award from Pharmaceutica 2017, London, UK
2017 Key-note Speaker, Nanodelivery 2017, Osaka, Japan
2017 Co-President and plenary speaker, BIONANOTOX, Greece
2017 Co-Program Chair, Annual Controlled Release Society Meeting, Boston
2017 Plenary Speaker, Drug Discovery and Therapy World Congress, Boston
2017 Plenary Speaker, Drug Delivery and Formulation Summit, Boston
2017 Plenary Speaker, YUCOMAT 2017, Montenegro
2017 Plenary Speaker, 21st International Symposium on Microencapsulation, Faro, Portugal
2017 Key-note Speaker, World Congress on Pharmacology and Chemistry of Natural Compounds, Tbilisi, Georgia
2017 Key-note Speaker, 4th European Biopharma Congress, Vienna, Austria
2017 Albert Nelson Marquis Lifetime Achievement Award
2018 Plenary Speaker, 9th Global Drug Delivery and Formulation Summit, Berlin, Germany
2018 Key-note Speaker, 16th International Conference on Pharmaceutics and Novel Drug Delivery Systems, Berlin, Germany
2018 Key-note Speaker, AAPS-NERDG Meeting, Farmington, CT
2018 Co-President and plenary speaker, BIONANOTOX, Greece
2018 Key-note speaker, Global Conference on Pharmaceutics and Drug Delivery Systems, Rome, Italy
2018 Plenary speaker, Frontiers in Delivery of Therapeutics, Tartu, Estonia
2018 Plenary speaker, YUCOMAT 2018, Montenegro
2018 Conference Chair and Plenary speaker, Material Science-2018, Amsterdam, The Netherlands
2018 Key-note speaker, 21st European Biotechnology Congress, Moscow, Russia

2018	Key-note speaker, Pharmaceutics and Novel Drug Delivery Systems, Moscow, Russia
2018	Key-note speaker, Applied Pharmaceutical Nanotechnology, Boston
2018	Co-Chair and Plenary speaker, 12th International Conference "Medical Applications of Advanced Biomaterials and Nano-biotechnology", Perugia, Italy
2019	Key-note speaker, 2nd International Conference on Pharmaceutical Nanotechnology and Nanomedicine, New York
2019	Plenary speaker, 6th World Summit on Cancer Research and Therapy, Dubai, UAE
2019	Honorary President and Plenary speaker, BIONANOTOX, Greece
2019	Sigma Xi
2019	Plenary speaker, YUCOMAT 2018, Montenegro
2019	Key-note speaker, 3rd Global Conference on Pharmaceutics and Drug Delivery Systems, Paris, France
2019	Key-note speaker, International Cancer Conference, London, UK
2019	Highly Cited Researcher from Thomson Reuters
2022	Key-note speaker, INVITE Conference, Germany
2022	Plenary speaker, Global Summit on Pharmaceutics and Drug Delivery Systems, Munich, Germany
2022	Plenary speaker, Global Summit and Expo on Materials Science and Engineering, Munich, Germany
2022	Invited speaker, Liposome Research Days, Vancouver, Canada
2022	Plenary speaker, CIMTEC, Perugia, Italy
2022	Plenary speaker, 2022 YUCOMAT, Montenegro
2022	Plenary speaker, ENDOCYTE conference, Berlin, Germany
2023	Plenary speaker, 2023 YUCOMAT, Montenegro
2023	2023 Citation Laureat by Clarivate

Major Committee Assignments:

1982-1991	The Highest Certifying Commission of the USSR (VAK)
1986-1991	International Commission on Pharmaceutical Enzymes.

Editorial Boards:

Editor-in-Chief	*Drug Delivery*
Editor-in-Chief	*Current Drug Discovery Technologies*
Co-Editor	*Current Pharmaceutical Biotechnology*
Associate Editor	*Biomedical Microdevices*
Review Editor	*Journal of Controlled Release*
1979-1986	*Enzyme Microbial Technology*
1984-1995	*Journal of Controlled Release*
1987-	A*dvanced Drug Delivery Reviews*
1988-1996	*Hemostasis*
1989-1992	*Biokhimia* (Russian)
1989-	*Journal of Microencapsulation*
1990-	*Bioconjugate Chemistry*
1992-	*Journal of Liposome Research*
1995-	*Journal of Drug Targeting*
1999-	*Journal of Controlled Release*
1999-	*European Journal of Pharmaceutics and Biopharmaceutics*
2002-	*Journal of Bioactive and Compatible Polymers*
2003-	*Molecular Pharmaceutics*

2003- *Current Drug Delivery*
2003- *Drug Discovery Today*
2004- *Chinese Journal of Interventional Imaging and Therapy*
2004- *Journal of Biomedical Nanotechnology*
2004- *Expert Opinion on Drug Delivery*
2004- *Current Protein and Peptide Science*
2005- *International Journal of Nanomedicine*
2005- *Journal of Biopharmaceutics and Biotechnology*
2005- *Nanotechnology, Diagnostics, and Therapeutics* (web journal from BioMedCentral)
2007- *Recent Patents on Drug Delivery and Formulation*
2011- *Journal of Pharmaceutical Technology and Drug Research*
2011- *Pharmacum Consequat*
2012- *Biomedical Microdevices*
2014- *Journal of Nanotechnology in Diagnosis and Treatment*
2014- *NanoDrugs*

Referee for the Following Journals:

- *Proceedings of the National Academy of Sciences of the USA*
- *Nature Biotechnology*
- *Trends in Biotechnology*
- *Biochimica et Biophysica Acta*
- *Cancer Research*
- *Journal of Nuclear Medicine*
- *Bioconjugate Chemistry*
- *Biotechnology and Bioenineering*
- *Biophysical Journal*
- *Journal of Lipid Research*
- *Pharmaceutical Research*
- *Journal of Pharmaceutical Sciences*
- *Journal of Controlled Release*
- *International Journal of Pharmacology*
- *Hemostasis*
- *Biopolymers*
- *Journal of Drug Targeting*
- *Drug Delivery*
- *Gene Therapy*
- *Journal of Liposome Research*
- *Journal of Microencapsulation*
- *Journal of Molecular Recognition*
- *Designed Monomers and Polymers*
- *Colloids and Surfaces B: Biointerfaces*
- *Reactive and Functional Polymers*
- *European Journal of Pharmaceutics and Biopharmaceutics*
- *European Journal of Pharmaceutical Sciences*
- *Biotechnology Progress*
- *Journal of Bioactive and Compatible Polymers*
- *Langmuir*
- *Nanomedicine*

- *Expert Opinion in Drug Delivery*

Grant and Proposal Reviews for:

Academy of Sciences of the USSR
Academy of Medical Sciences of the USSR
Scientific Council on Medical Biotechnology (USSR)
International Science Foundation
United States Army Medical Research
University of British Columbia, Canada
North Carolina Biotechnology Center
Natural Sciences and Engineering Research Council of Canada
The Israel Science Foundation
National Institutes of Health
Fund for Scientific Research, Austria
The Dutch Cancer Society
The Canadian Institutes of Health Research
Swiss National Science Foundation
United States-Israel Binational Science Foundation
Ireland Foundation Science
Italian Scientific Council

Ph.D. and D.Sc. Thesis Committees:

The Highest Certifying Commission of the USSR
Scientific Council of the USSR Cardiology Research Center, Academy of Medical Sciences of the USSR
Scientific Council of the Institute of Experimental Cardiology, Academy of Medical Sciences of the USSR
Scientific Council of the Institute of Petrochemical Synthesis, Academy of Sciences of the USSR
Massachusetts Institute of Technology
Northeastern University
University of Massachusetts
Harvard Medical School
Massachusetts General Hospital

Own students – more than 50 PhDs and more than 100 MS are trained

Professional Societies:

1968-1992	USSR Mendeleev Chemical Society
1975-1992	USSR Biochemical Society
1991-1995	Society of Nuclear Medicine
1991-	Controlled Release Society (1995-1998 – Board of Governors; member of the following committees: Strategic Planning, Young Investigator Award, Best Pharmaceutical Paper Award; 2003-2007 – Board Member as Vice President, President-Elect, President and Immediate Past President)
1992-	American Chemical Society
2000-	International Liposome Society
2001-	American Association of Pharmaceutical Scientists
2010-	American Association of Colleges of Pharmacy

Co-founder:

Oncologic Biopahramceuticals

MitoVec Inc.
Encapsion Inc.
Nemucore Medical Innovations
Blue Ocean
Immix LLC
Mechanical Drugs

SAB member and/or Consultant for:

Labopharm Inc.
Genzyme Corp.
Procyon Biopharma Inc.
Boston Life Sciences Inc.
Endorex Inc.
Oncologic
MitoVec Inc.
PureTech
Nanopharma
CellGate Inc.
LigoCyte Inc.
Eurand
Oral Vaccine Institute
Encapsion
Solubest
Nemucore Medical Innovations
Blue Ocean

Organizing, Steering, Advisory, and Program Committees for:

- International Symposium "Advances in Enzyme Engineering", Tbilisi 1978.
- Conference of CMEA countries, Warsaw, Poland 1980.
- I All-Union Symposium "Liposomes in Biology and Medicine", Moscow 1980.
- VI All-Union Symposium on Sythetical Polymers of Medical Application, Alma-Ata 1983.
- VIII All-Union Symposium "Synthetic Polymers of Medical Application", Kiev 1989.
- International Symposium "Liposomes in Biology and Medicine", Tashkent 1990.
- International Liposome Conference, St. Petersburgh, Russia 1993.
- 1st International Conference on Polymer Therapeutics, London, UK 1996.
- 10th International Symposium on Radiopharmacology, Rapallo, Italy 1997.
- Symposium on Targeting the Cardiovascular System, Boston 1997.
- 3rd Symposium on Polymer Therapeutics, London, UK, 1998.
- 26th International Symposium on Controlled Release of Bioactive Materials, Boston, 1999 (Co-Chairman, Program Committee).
- 3rd International Symposium on Frontiers in Biomedical Polymers, Shiga, Japan, 1999.
- 4th International Symposium on Polymer Therapeutics, London, UK, 2000.
- 4th International Symposium on Frontiers in Biomedical Polymers, Virginia Beach, 2001.
- 28th International Symposium on Controlled Release of Bioactive Materials, San Diego, 2001.
- 5th International Symposium on Polymer Therapeutics, Cardiff, UK, 2002.
- Gordon Research Conference on Drug Carriers in Biology and Medicine, Ventura (2000 – Co-Vice-Chairman; 2002 – Co-Chairman).
- 7th International Symposium on Pharmaceutical Sciences, Ankara, Turkey, 2003.
- 3rd Symposium on Nanomedicine and Drug Delivery, Baltimore, 2005.

- Indo-Japanese Conference on Drug Delivery, Mumbai, India, 2005.
- 13th International Pharmaceutical Technology Symposium, Antalya, Turkey, 2006.
- 4th International Symposium on Nanomedicine and Drug Delivery, Omaha, Nebraska, 2006.
- Symposium on Nanomedicine, Brooklyn Polytechnic, 2006.
- Symposium on Cancer Nanomedicine, Santa Clara, 2007 (Co-Chairman).
- 5th International Symposium on Nanomedicine and Drug Delivery, Boston, 2007 (Chairman).
- 7th International Symposium on Polymer Therapeutics, Valencia, Spain, 2008.
- Symposium on Nanomedicine in Cancer, Boston, 2008.
- International Conference on Smart Materials, Aceriale, Italy, 2008.
- International Conference NanoBio'08, St. Petersburg, Russia, 2008.
- 17th International Conference on Microencapsulation, Japan, 2009.
- 19th International Microencapsulation Symposium, Pamplona, Spain, 2013.
- International Congress on Biomaterials, Greece, 2014.
- Liposome Research Days, Copenhagen, Denmark, 2014.
- 20th International Microencapsulation Symposium, Boston, USA, 2015 (Chairman).
- BIONANOTOX, Greeece, 2016
- International Symposium on Controlled Release of Bioactive Materials, Boston, 2017 (Co-Chairman, Program Committee).
- BIONANOTOX, Greece, 2017.
- 4th European Biopharma Congress, Austria, 2017.
- 16th International Conference on Pharmaceutics and Novel Drug Delivery Systems, Germany, 2018
- BIONANOTOX, Greece, 2018
- Conference Chair, Material Science-2018, Amsterdam, The Netherlands

MAJOR RESEARCH INTERESTS:

1. Physiologically active polymers and their use as drug carriers. Polymeric drugs. Slow release systems. Pharmacokinetics and biodistribution of slow release drugs.
2. Engineering of arious systems for controlled delivery of pharmaceuticals including macromolecular drugs, DNA, and imaging agents.
3. Targeted delivery of therapeutic and diagnostic agents. Tumor targeting and targeting within the cardiovascular system.
4. Physico-chemical aspects of enzyme stabilization and immobilization on polymeric carriers.Therapeutic enzymes. Experimental thrombolytic therapy.
5. Artificial phospholipid membranes. Liposomes, their physico-chemical and biologicalcproperties. Long-circulating and polymer-modified liposomes as drug carriers. Immunoliposomes. Protein binding with liposomes. Liposome-cell interactions. Pharmacokinetics of liposomes.
6. Micellar solubilization of poorly soluble drugs. Polymeric micelles. Targeted micelles. Immunomicelles. Micellar tumor targeting.
7. Experimental diagnostic imaging. Contrast agents for gamma-imaging, magnetic resonance imaging and computed tomography. Labeling of polymers, proteins (antibodies and their fragments), and microparticulates (liposomes, nanoparticles, micelles) with diagnostic metal isotopes via chelating groups. Chelating polymers for heavy loading antibodies with metal isotopes. Amphiphilic chelating polymers as key components of liposomal and micellar imaging agents. Iodine-containing long-circulating micelles for computed tomography.
8. Experimental tumor immunology and therapy. Intratumor delivery of drugs and imaging agents. Tumoricidal antibodies. Accumulation of long-circulating drugs in tumors.

Funding History (as PI unless noted):

1988-1989, from the USSR Academy of Medical Sciences: "Immobilized 60, 000 rub.

thrombolytic enzymes"

1988-1989 from the USSR Academy of Medical Sciences: "Liposomes for drug targeting"	50, 000 rub.
1989-1990 from the USSR Scientific Council on Biotechnology: "Chelating polymers for antibody modification"	75, 000 rub.
1989-1990 from the USSR Academy of Medical Sciences: "Targeted visualization of thrombi"	45, 000 rub.
1992-1993 from Sterling Winthrop: "Chelating polymer-modified antibodies for the delivery of imaging agents"	$ 70, 000
1992-1993 from Sterling Winthrop: "Micellar imaging agents for CT"	$ 90, 000
1995 from Biogen: “Biodistribution of antibodies”	$ 10, 000
1996-1997 from RSNA “Iodine-containing micellar carriers for CT”	$ 20, 000
1996-1997 from Boston Life Sciences “Targeted drug delivery into tumors”	$ 72, 500
1996-1997 from Boston Life Sciences “Delivery of PEGylated drugs into tumors”	$ 205, 000
1997-2000 from NIH “Long-circulating polymer-modified liposomes”direct	$ 370,000
1998 from Boston Life Sciences "Delivery of micellar drugs into tumors"	$ 105,000
1998-1999 from Biostream "Polychelating polymers for imaging"	$ 33,000
1999from Procyon Biopharma "Experimental tumor therapy"	$ 13,500
1999-2000 from Biogen “Antibody biodistribution”	$ 22,000
1999-2003 from NIH: "Micellar carriers for sparingly soluble pharmaceuticals"	direct $ 585,000
2000from Procyon Biopharma “Experimental tumor therapy”	$ 225,000
2000-2005 from NIH “Bioengineering of artificial blood”	direct $ 740,000
2001from Biogen “Antibody biodistribution”	$ 19,000
2001-2005 from NIH: “Long-circulating polymer-modified liposomes”	direct $600,000
2001-2002 from Procyon Biopharma “Imaging with anticancer antibodies”	$ 94,000
2002-2003 from Center for Disease Control: “A liposome-based hepatitis-B vaccine” (sub-contract from Oral Vaccine Institute)	direct $125,000
2003-2004 from The Medical Foundation: “Antibody-mediated drug delivery to astrocytic tumors”	direct $100,000
2003-2007 from NIH “Antibody-targeted polymeric systems for tumor imaging”	direct $765,000
2003-2008 from NIH “Micellar carriers for sparingly soluble drugs”	direct $1,125,000
2005-2009 from NIH “Long-circulating polymer-modified liposomes”	direct $700,000
2005 from Biogen “Protein biodistribution”	$39,000
2006-2012 from NIH “Multifunctional pahramaceutical nanocarriers”	direct $875,000
2007-2009 from Keck Foundation “Nanochip” (co-PI)	direct $1,200,000
2007-2012 from NIH “Phage-protein modified nanopharmaceuticals for breast cancer therapy” (subcontract PI)	direct $500,000
2008-2008 from DSM Corporation “liposomes from glycolipids”	$90,000
2008-2013 from NIH “Nanocarriers for intracellular targeting”	direct $1,000,000
2008-2009 from Samyang Corp. “siRNA delivery”	direct $150,000

2009-2011 from NIH Supplement for Intracellular targeting grant	direct $200,000
2010-2013 from NIH "Layer-by-layer technology for poorly soluble drugs"	direct $1,000,000
2010-2015 from NIH "Center for Cancer Nanotechnology Excellence"	direct $8,500,000
2011-2013 from US-Israel Binational Science Foundation	direct $65,000
2010-2013 from Manganaro Fund	direct $360,000
2012-2013 from Immix Co	direct $45,000
2014-2015 from NIH "MMP-2-sensitive nanopreparations"	direct $250,000
2015-2017 from NSF "Novel Nanoprinting for Oral Delivery of Poorly Soluble Drugs"	direct $198,000
2015-2021 from NIH "Lipid-dendrimer conjugates for siRNA and drug delivery"	direct $1,130,000
2015-2016 from Immix Co	direct $35,000
2015-2016 from Tufts University	direct $30,000
2016-2017 from Immix Co	direct $25,000
2016-2021 from NIH "Mechanical Drugs"	direct $440,000
2017-2018 TIER 1 grant fron NEU	direct $50,000
2020 Small COVID-19 grant from NEU	direct $28,000

BIBLIOGRAPHY (Google Scholar gives >80,000 citations with H index of 130)

Original Papers:

1. Kirsh YE, Bessmertnaya LY, **Torchilin VP**, Papisov MI, Kabanov VA. Structural transformations of poly-4-vinylisamylpyridinium-bromide macromolecules. *DAN USSR* (Russ.) 1970; 191:603-606.

2. **Torchilin VP**, I'lina EV, Streltsova ZA, Smirnov VN, Chazov EI. Enzyme immobilization on heparin. *J Biomed Mater Res.* 1973; 12:685-690.

3. **Torchilin VP**, Litvak ZM, Esina GN, Makarova SB, Gryaznov GV. Immobilization of some enzymes on modified styrenedivinylbenzene matrixes. *Bioorganicheskaya Khimia* (Russ.) (Bioorganic Chemistry) 1975; 1:1231-1235.

4. **Torchilin VP**, Bobkova AS, Smirnov VN, Chazov EI. Immobilization of enzymes on biocompatible carriers. I. Immobilization of α-chymotrypsin on modified Sephadexes. *Bioorganicheskaya Khimia* (Russ.) (Bioorganic Chemistry) 1976; 2:116-124.

5. **Torchilin VP**, Tischenko EG, Smirnov VN, Chazov EI. Immobilization of enzymes on biocompatible carriers. II. Immobilization of α-chymotrypsin on polyvinylpyrrolidone. *Bioorganicheskaya Khimia* (Russ.) (Bioorganic Chemistry) 1976; 2:399-405.

6. **Torchilin VP**, Reyzer IL, Tischenko EG, Smirnov VN, Chazov EI. Immobilization of enzymes on biocompatible carriers. III. Immobilization of α-chymotrypsin on soluble dextrans. *Bioorganicheskaya Khimia* (Russ.) (Bioorganic Chemistry) 1976; 2:1252-1253.

7. **Torchilin VP**, Reyzer TL, Tischenko EG, Il'ina EV, Smirnov VN, Chazov EI. Immobilization of ezymes on biocompatible carriers. IV. Modification of α-chymotrypsin with water soluble vinylic copolymers. The evaluation of immobilized chymotrypsin accessibility for protein inhibitor. *Bioorganicheskaya Khimia* (Russ.) (Bioorganic Chemistry) 1976; 2:1687-1694.

8. Martinek K, Goldmacher VS, Klibanov AM, **Torchilin VP**, Smirnov VN, Chazov EI, Berezin IV. Main principles of enzyme stabilization. Increased thermostabilization of α-chymotrypsin upon covalent coupling to complimentary surface of polymer carrier. *DAN USSR* (Russ.) 1976; 228:1468-1471.

9. **Torchilin VP**, Tischenko EG, Smirnov VN, Chazov, EI. Immobilization of enzymes on slowly soluble carriers. *J Biomed Mater Res.* 1977; 11:223-235.

10. **Torchilin VP**, Tischenko EG, Smirnov VN. Covalent immobilization of enzymes on ionogenic carriers. Effect of electrostatic complex formation prior to immobilization. *J Solid-Phase Biochem.* 1977; 2:19-29.

11. **Torchilin VP**, Galka M, Ostrowski W. Comparative studies on immobilization of human prostatic acid phosphatase. *Biochim Biophys Acta.* 1977; 488:331-336.

12. Chazov EI, Mazaev AV, **Torchilin VP**, Lebedev BS, Il'ina EV, Smirnov VN. Experimental study of biosoluble drugs. Thrombus lysis with biosoluble immobilized fibrinolysin in experiment. *Thrombosis Res.* 1978; 12:809-816.

13. **Torchilin VP**, Il'ina EV, Mazaev AV, Lebedev BS, Smirnov VN, Chazov EI. Study of modified Sephandex-bound insulin in dog experiments. *J Solid-Phase Biochem.* 1978; 2:187-193.

14. **Torchilin VP**, Maksimenko AV, Smirnov VN, Martinek K, Klibanov AM, Berezin IV. Principles of enzyme stabilization. III. The effect of the length of intramolecular linkage on thermostability of enzymes. *Biochim Biophys Acta* 1978; 522:277-283.

15. Martinek K, **Torchilin VP**. Main principles of enzyme stabilization. *Biologicheskaya Khimia* (Russ.) (Biological Chemistry) 1978; 12:17-48.

16. **Torchilin VP.** Enzyme immobilization on biocompatible carriers. *Bioorganicheskaya Khimia* (Russ.) (Bioorganic Chemistry) 1978; 4:566-568.

17. **Torchilin VP**, Goldmacher VS, Smirnov VN. Comparative study on covalent and noncovalent immobilization of enzymes on the surface of liposomes. *Biochem Biophys Res Commun.* 1978; 85:983-990.

18. **Torchilin VP**, Goldmacher VS, Smirnov VN. Binding of proteins with liposomes. *Bioorganicheskaya Khimia* (Russ.) (Bioorganic Chemistry) 1978; 4:1560-1562.

19. Martinek K, **Torchilin VP**, Maksimenko AV, Smirnov VN, Berezin IV. Chemical modification of "key" functional groups in tertiary protein structure. *DAN USSR* (Russ.) 1979; 247:1505-1508.

20. **Torchilin VP**, Maksimenko AV, Smirnov VN, Klibanov AM, Berezin IV, Martinek K. Principles of enzyme stabilization. IV. The modification of "key" groups in the tertiary structure of proteins. *Biochim Biophys Acta.* 1979; 567:1-11.

21. **Torchilin VP**, Maksimenko AV, Smirnov VN, Berezin IV, Martinek K. Principles of enzyme stabilization. V. The possibility of enzyme self-stabilization under the action of potentially-reversible intramolecular cross-linkages of different length. *Biochim Biophys Acta* 1979; 568:1-10.

22. Varshavskaya MY, Klibanov AL, Goldmacher VS, **Torchilin VP**. Simple and accurate method for the determination of heparin content in Heparin-Sepharose. *Anal Biochem.* 1979; 95:449-451.

23. **Torchilin VP**, Maksimenko AV, Martinek K. Self stabilization of enzymes under the action of intra-molecular linkages of different length. *Bioorganicheskaya Khimia* (Russ.) (Bioorganic Chemistry) 1979; 5:1243-1247.

24. Khoshtariya DA, Topolev VV, Krishtalik LI, Reyzer IL, **Torchilin VP**. The study on proton transition under enzyme hydrolysis by the method of temperature dependence of kinetic isotope effect. III. Hydrolysis of Ac-Tyr-OEt and Bz-Tyr-OEt with α-chymotrypsin immobilized on soluble dextran. *Bioorganicheskaya Khimia* (Russ.) (Bioorganic Chemistry) 1979; 5:1243-1247.

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Books ans Special Journal Issues:

1. **Torchilin VP**. *Immobilizovannye Fermenty v Medicine*. Moscow: Znanie, 1986.

2. **Torchilin VP**, ed. *Chemical Modification and Design of the New Formulations of Biologically Active Substances*. Moscow: VINITI Publishers, 1988.

3. **Torchilin VP**. *Immobilized Enzymes in Medicine*. Berlin-Heidelberg: Springer Verlag, 1991.

4. **Torchilin VP**, Trubetskoy VS, eds. *Liposomes in Diagnostic Imaging*, Special Issue, J Liposome Res. 1994:4.

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8. Weissig V, **Torchilin VP**, eds. *Drug Delivery to Mitochondria*, Special Issue, Advanced Drug Delivery Reviews, 2001:49 (1/2).

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22. Nayak AK, Hasnain MS, Aminabhavi TM, **Torchilin VP,** eds. *Systems of Nanovesicular Drug Delivery*, Academic Press, 2022.

23. Nayak AK, Hasnain MS, Aminabhavi TM, **Torchilin VP,** eds. *Applications of Nanovesicular Drug Delivery*, Academic Press, 2022.

Visiting Professor to:

1. Institute of Medical Biochemistry, Copernik Academy, Krakov, Poland, 1977.
2. Assoreni Co., Rome, Italy, 1979, 1981.

3. Institute of Physiological Chemistry, Martin Luter University, Halle, Germany, 1980, 1982.
4. Department of Organic Chemistry, Unviersity of Mainz, Germany, 1986.
5. Cardiac Unit and Department of Nuclear Medicine, Massachusetts General Hospital, Boston, Massachusetts, 1978, 1982 1985, 1987, 1989, 1990.
6. Department of Biochemistry, University of Tennessee, Knoxville, Tennessee, 1991.
7. University of South Paris, 2016.
8. Moscow State University, 2017.

Invited Lectures at Conferences:

1. II Soviet-American Symposium "Myocardial Metabolism", Sochi, May 1975.
2. VII European Cardiology Congress, Amsterdam, June, 1976.
3. Soviet-American Symposium on Protein Chemistry and Physics, Riga, August, 1976.
4. III Soviet-American Symposium "Myocardial Metabolism" USA, May 1977.
5. IV All-Union Symposium on Protein Physics and Chemistry, Minsk, September 1977.
6. II All-Union Symposium on Preparation and Application of Immobilized Enzymes, Erevan, October 1977.
7. Soviet-American Conference "Methods for Production and Applicaiton of Enzymes in Industry and Analytical Studies", Tallin, November, 1977.
8. International Symposium on Biomedical Engineering, Delhi, India, February, 1978.
9. XII FEBS Congress, Drezden, July, 1978.
10. 18 Symposium on macromolecules, Prague, July 1978.
11. International Symposium "Advances in Enzyme Engineering", Tbilisi, June 1978.
12. IV Soviet-American Symposium "Myocardial Metabolism", Tashkent, September 1979.
13. IV All-Union Biochemical Congress, Leningrad, September 1979.
14. V Soviet-American Conference on Enzyme Engineering, Yurmaia, September 1979.
15. Conference of CMEA countries, Warsaw, Poland, May 1980.
16. IV All-Union Symposium on Immobilized Enzymes, Leningrad, October 1980.
17. I All-Union Symposium "Liposomes in Biology and Medicine", Moscow, November 1980.
18. All-Union Symposium "Magnetic Resonance in Biology and Medicine", Chernogolovka, March 1981.
19. II Soviet-French Symposium "Mechanisms of Pathogenesis of Artherosclerosis and Thrombosis", Nalchik, September 1981.
20. III Soviet-Swedish Symposium on Physico-Chemical Biology, Tbillisi, September 1981.
21. VI International Conference on Enzyme Engineering, Japan, September 1981.
22. I All-Union Biophysical Congress, Moscow, August 1982.
23. IV All-Union Symposium on Immobilized Enzymes, Kiev, May 1983.
24. IV All-Union Symposium on Biochemistry of Lipids, Kiev, July 1983.
25. IV All-Union Symposium on Medical Enzymology, Alma-Ata, October 1983.
26. VI All-Union Symposium on Sythetical Polymers of Medical Application, Alma-Ata, October 1983.
27. International Symposium on Polymers in Biology and Medicine, Prague, June 1984.
28. VI Soviet-American Symposium "Myocardial Metabolism", Baku, September 1984.
29. II International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, Utah, February 1985.
30. V All-Union Conference on Enzyme Engineering, Kobuleti, May 1985.
31. Course on Drug Targeting at Volgograd Medical Institute, 1985.
32. V All-Union Biochemical Congress, Kiev, 1986.
33. V All-Union Symposium on Medical Enzymology, Makhachkala, 1986.
34. Course on Liposomes at the Institute of Biochemistry, Tashkent, 1986.
35. FEBS Congress, Ljubljana, Yugoslavia, 1987.
36. Liposome Symposium, Halle, Germany 1987.

37. Symposium on Biomedical Engineering, Alma-Ata 1987.
38. Natterman Symposium on Lipids, Cologne, West Germany, May 1988.
39. Interbiotech'88, Bratislava, Czechoslovakia, June 1988.
40. IUB Congress, Prague, Chechoslovakia 1988.
41. VIII All-Union Symposium "Synthetic Polymers of Medical Application", Kiev 1989.
42. All-Union Symposium "Reconstruction, Stabilization and Reparation of Biomembrane, Blagoveschensk 1989.
43. Vth International Pharmaceutical Technology Symposium, Ankara, September 1990.
44. International Symposium on Innovations in Pharmaceutical Sciences Technology, India, October 1990.
45. International Symposium "Liposomes in Biology and Medicine", Tashkent, November 1990.
46. International Conference on Thrombosis, The Netherlands, October 1991.
47. European Conference on Controlled Drug Release, The Netherlands, April 1992.
48. Gordon Research Conference on Polymers in Biosystems, Oxnard, February 1992.
49. 2nd Liposome Research Days, Leiden, The Netherlands, June 1992.
50. IUPAC Conference on Macromolecules, Prague, Chechoslovakia, July 1992.
51. American Chemical Society Meeting, San Francisco, March 1992.
52. AAAS Meeting, Boston, February 1993.
53. 6th International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, Utah, February 1993.
54. International Liposome Conference, St. Petersburgh, Russia, June 1993.
55. Second International Symposium on Polymers for Advanced Technologies, Oxford, United Kingdom, September 1993.
56. International Conference, "Liposomes in Drug Delivery," London, United Kingdom, December 1993.
57. 3rd Liposome Research Days Conference, Vancouver, Canada, June 1994.
58. Sapporo Symposum on Intelligent Polymer Gels, Sapporo, Japan, October, 1994.
59. 11th International Symposium on Affinity Chromatography and Biological Recognition, San Antonio, May 1995.
60. 22st International Symposium on Controlled Release of Bioactive Materials, Seattle, Washington, July-August 1995.
61. Fourth Liposome Research Days Conference, Freiburg, Germany, August-September 1995.
62. Current Concepts in Cardiovascular Diseases, New Dehli, India, December 1995.
63. 1st International Conference on Polymer Therapeutics, London, UK, January 1996.
64. New Drug Delivery Systems, Ahmedabad, India, March 1996.
65. 5th Liposome Research Days Conference, Shizuoka, Japan, July 1996.
66. 23rd International Symposium on Controlled Release of Bioactive Materials, Kyoto, Japan, July 1996.
67. 8th International Pharmaceutical Technology Symposium, Ankara, Turkey, September 1996.
68. Conference on Liposome Advances: Progress in Drug and Vaccine Delivery, London, UK, December 1996.
69. Blood Substitute Conference, San Diego, March 1997.
70. Chemistry and Biology of Polyethylene Glycol, ACS Meeting, San Francisco, April 1997.
71. 10th International Symposium on Radiopharmacology, Rapallo, Italy, May 1997.
72. 6th International Symposium on the Synthesis and Application of Isotopes and Isotopically Labeled Compounds, Philadelphia, September 1997.
73. International Symposium on Targeting the Cardiovascular System, Boston, September 1997.
74. 2nd Central European Symposium on Pharmaceutical Technology, Portoroz, Slovenia, September 1997.
75. 3rd International Symposium on Polymer Therapeutics, London, UK, January 1998.
76. Gordon Research Conference on Drug Carriers in Biology and Medicine, Ventura, February 1998.

77. Conference on Medical Imaging, Barcelona, Spain, May 1998.
78. 1998 Meeting of Brazilian Society of Biochemistry and Molecular Biology, Caxambu, Brazil, May 1998.
79. 216th American Chemical Society National Meeting, Boston, August 1998.
80. European Meeting on Frontiers in Pharmaceutical Sciences, Zermatt, Switzerland, October 1998.
81. American Chemical Society Meeting, Polymer Therapeutics, Anaheim, March 1999.
82. 3rd International Symposium on Frontiers in Biomedical Polymers, Shiga, Japan, May 1999.
83. 3rd International Conference on Advanced Polymers via Macromolecular Engineering, Williamsburg, August 1999.
84. 2nd International Symposium on Pharmaceutical Chemistry, Ankara, Turkey, September 1999.
85. International Symposium on Lipid and Dispersed Systems, Moscow, Russia, September 1999.
86. Meeting of American College of Clinical Pharmacy, Kansas City, October 1999.
87. International Symposium on Biomedical Polymers in 21st Century, Sapporo, Japan, November 1999.
88. Fourth International Conference on Liposome Advances, London, UK, December 1999.
89. 34th Gattefosse Conference on Frontiers in Biopharmacy, Saint-Remy, France, June 2000.
90. Gene Delivery Conference, Brooklyn Politechnic University, Brooklyn NY, June 2000.
91. 27th International Symposium on Controlled Release of Bioactive Materials, Paris, France, July 2000.
92. International Symposium on Biomaterials and Drug Delivery Systems, Cheju, Korea, August 2000.
93. Annual AAPS Meeting, Indianapolis, November 2000.
94. 28th International Symposium on Controlled Release of Bioactive Materials, San Diego, June 2001.
95. European Symposium on Peptides, Krakow, Poland, September 2001.
96. 5th International Conference on Liposome Advances, London, UK, December 2001.
97. 1st NIH Meeting on TAT-mediated cancer treatment, Rockville, MD, February 2002.
98. American Chemical Society Meeting, Orlando, FL, April 2002.
99. International Symposium Particles 2002, Orlando, FL, April 2002.
100. International Conference Liposomes. From Models to Applications, Wroclaw, Poland, May 2002.
101. American Chemical Society Meeting, Boston, MA, August 2002.
102. 11th International Pharmaceutical Technology Symposium, Istanbul, Turkey, September 2002.
103. 2nd IBC's International Conference on Protein and Peptide Drug Delivery, Boston, MA, September 2002.
104. Transitioning Biomaterials in the 21st Century, Maui, December 2002.
105. Challenge in Drug Delivery for the New Millenium, Saint-Remy de Provence, France, June 2003.
106. 7th International Symposium on Pharmaceutical Sciences, Ankara, Turkey, June 2003.
107. Liposomes Revisited, Groningen, The Netherlands, June 2003.
108. 5th International Symposium on Frontiers in Biomedical Polymers, Ischia, Italy, September 2003.
109. Annual AAPS Meeting, Salt Lake City, November 2003.
110. International Conference on Advanced Materials, Singapore, December 2003.
111. 6th International Conference on Liposome Advances, London, UK, December 2003.
112. International Conference in Nanomaterials, Dallas, January 2004.
113. International Symposium on Nano-Biotechnology, Okayama, Japan, February 2004.
114. AAPS – Northeast Regional Meeting, Rocky Hill, Conn, April 2004.
115. 9th Liposome Research Days Conference, Hsinchu, Taiwan, May 2004.
116. International Conference on Pharmaceutics, Huanzhou, China, May 2004.
117. Israeli Chapter of Controlled Release Society Meeting, Haifa, Israel, September 2004.
118. AAPS Annual Meeting, Baltimore, November 2004.
119. Nanotechnology Conference. Nanotechnology for Cancer, Anaheim, May 2005.
120. Amphiphiles and Their Aggregates in Basic and Applied Science, Wroclaw, Poland, May 2005.
121. Cell-Penetrating Peptides and Applications, Stockholm, Sweden, May 2005.

122. Advances in Drug Discovery and Delivery, Moscow, Russia, July 2005.
123. 2005 AAPS Meeting, Nashville, November 2005.
124. Indo-Japanese Conference on Drug Delivery, Mumbai, India, November 2005.
125. Course on Nanomedicine, Helsinki, Finland, February 2006.
126. International Conference on Biotechnology and Nanomedicine, Moscow, Russia, March 2006.
127. Material Research Society Meeting, San Francisco, April 2006.
128. G.O.T.Summit, Boston, April 2006.
129. Particles 2006 Conference, Orlando, May 2006.
130. Nanomedicine for Cancer Conference, Boston, May 2006.
131. Annual Controlled Release Society Meeting, Vienna, Austria, July 2006.
132. Gordon Research Conference in Drug Carriers in Medicine and Biology, Big Sky, Montana, August 2006.
133. 13th International Pharmaceutical Technology Symposium, Antalya, Turkey, September 2006.
134. 4th International Symposium on Nanomedicine and Drug Delivery, Omaha, Nebraska, October 2006.
135. New Jersey Symposium on Biomaterials, Rutgers University, November 2006.
136. Symposium on Nanomedicine, Brooklyn Polytechnic, December 2006.
137. International Conference on Liposome Advances, London, UK, December 2006.
138. Conference on Nanomedicine, University of Kansas, Kansas City, February 2007.
139. Controlled Release Society Meeting, Mumbai, India, February 2007.
140. International Conference on Recent Advances in Drug Delivery Systems, Sal Lake City – February 2007.
141. International Symposium on Cell-Penetrating Peptides, Telford, UK – May 2007.
142. Symposium on Cancer Nanomedicine, Santa Clara – May 2007.
143. International Symposium on Drugs and Targets, Berlin, Germany – June 2007.
144. IUPAC Meeting on Biomedical Polymers, New York – June 2007.
145. International Symposium on Frontiers in Biomedical Polymers, Ghent, Belgium – June 2007.
146. Symposium on Cancer Nanomedicine, Paris, France – June 2007.
147. 34th Annual Controlled Release Society Meeting, Long Beach – July 2007.
148. 2007 American Chemical Society Meeting, Boston – August 2007.
149. 16th International Meeting on Microencapsulation, Lexington, KY – September 2007.
150. 2nd International Symposium on Intracellular Delivery of Therapeutic Molecules, Grenoble, France – September 2007.
151. International Peptide Symposium, Cairns, Australia – October 2007.
152. Liposome Advances, London, UK – December 2007.
153. BIROW-5, NIH – January 2008.
154. Symposium on Nanotechnology in Medicine, Boston University – April 2008.
155. American Chemical Society Annual Meeting, New Orleans – April 2008.
156. Symposium on Nanomedicine in Cancer, Boston – June 2008.
157. International Conference on Smart Materials, Aceriale, Italy – June 2008.
158. International Conference NanoBio'08, St. Petersburg, Russia – June 2008.
159. Gordon Research Conference on Barriers in CNS, Tilton, NH – June 2008.
160. Annual ACS meeting, Philadelphia – August 2008.
161. International Pharmaceutical Technology Symposium, Antalya, Turkey – September 2008.
162. 2008 Nanomedicine and Drug Delivery Symposium, Toronto, Canda – October 2008.
163. Nanotechnology Congress, Moscow, Russia – December 2008.
164. Indo-US Summit on Cancer Nanotechnology, New Delhi, India – February, 2009.
165. Annual ACS meeting, Salt Lake City – March 2009.
166. Liposome research Conference, Itaparica, Brazil – April 2009.
167. Phospholipid Conference, Heodelberg, Germany – May 2009.
168. Nanomedicine Symposium, Moscow, Russia – June 2009.

169. FEBS Meeting, Prague, Czech Republic – July 2009.
170. Annual CRS Meeting, Copenhagen, Denmark – July 2009.
171. Key Symposium, Stockholm, Sweden – September 2009.
172. International Symposium on Microencapsulation, Nagoya, Japan – September 2009.
173. International Conference on Nanotechnology, Rusnanotech, Moscow, Russia – October 2009.
174. International Nanotechnology in Oncology Conference, Moscow, Russia – October 2009.
175. NanoUtah Conference, Salt Lake City – October 2009.
176. American Society for Nanomedicine Conference, Potomac – October 2009.
177. Material Research Society Meeting, Boston – December 2009.
178. International Conference on Liposome Advances, London – December 2009.
179. International Conference on Biological Barriers, Saarbrucken, Germany – March 2010.
180. International Symposium on Biomedical Polymers for Drug Delivery, Salt Lake City – March 2010.
181. Russian-Greek Conference on Nanobiomedicine, Heraklion, Greece, May 2010.
182. 3rd European Conference on Clinical Nanomedicine, Basel, Switzerland, May 2010.
183. Symposium on Cancer Nanomedicine, Anaheim, CA, June 2010.
184. International Meeting on Liposomes, Vancouver, Canada, August 2010.
185. Round Table on Clinical Nanomedicine, Nurenberg, Germany, September 2010.
186. Conference on Cell Penetrating Peptides, Copenhagen, Denmark, September 2010.
187. 2nd US-China Meeting on Cancer Nanomedicine, Washington DC, September 2010.
188. Conference on Nanomedicine, Los Angeles, March 2011.
189. UKICRS Meeting, Belfast, UK, April 2011.
190. AVRO Annual Meeting, Fort Lauderdale, FL, May 2011.
191. Liposome Meeting, Jerusalem, Israel, May 2011.
192. Cell-penetrating Peptides in Therapeutic Delivery, Tallinn, Estonia, May 2011.
193. Pharmaceutical Technology Conference, Antalya, Turkey, September 2011.
194. International Liposome Society meeting, London, UK, December 2011.
195. Arden House Conference on Nanomedicine, West Point, March 2012.
196. European Conference and School on Nanomedicine and Nanotoxicology, Crete, Greece, May 2012.
197. Material Research Society Meeting, Montecatini Terme, Italy, June 2012.
198. Controlled Release Society Annual meeting, Quebec City, Canada, July 2012.
199. Israeli Controlled Release Society Meeting, Israel, September 2012.
200. International Pharmaceutical Technology Conference, Antalya, Turkey, September 2012.
201. Liposome Research Days, Hangzhou, China, October 2012.
202. AAPS Annual Meeting, Chicago, October 2012.
203. International Pharmaceutical Technology Conference, Kuala Lumpur, Malaysia, November 2012.
204. International Conference on Biopolymers, Maui, December 2012.
205. Nanomedicine Conference, Los Angeles, March 2013.
206. International Biotechnology Congress, Moscow, Russia, March 2013.
207. 19th International Meeting on Microencapsulation, Pamplona, Spain, September 2013.
208. AAPS Annual Meeting, San Antonio, October 2013.
209. International Conference on Pharmaceutics, Ribeirao Preto, Brazil, November 2013.
210. International Conference on Nanotechnology for Health, Belo Horizonte, Brazil, November 2013.
211. International Meeting on Liposome Advances, London, UK, December 2013.
212. Nanotechnology for Health Care Conference, Little Rock, April 2014.
213. International Congress on Biomaterials, Heraklion, Greece, May 2014.
214. Drug Discovery and Therapy World Congress, Boston, June 2014.
215. Liposome Research Days, Copenhagen, Denmark, July 2014.
216. Nanotechnology Meeting, Buenos Aires, Argentina, September 2014.
217. Nanomedicine Conference, Los Angeles, March 2015.
218. Annual AACR Meeting, Philadelphia, April 2015.

219. International Congress on Biomaterials, Greece, May 2015.
220. International Conference on Pharmaceutical Technology, Istanbul, Turkey, May 2015.
221. France Nanotech, Paris, June 2015.
222. EVONIK Meets Science Conference, New Jersey, September 2015.
223. OMICS Conference on Cancer Therapy, Valencia, November 2015.
224. Liposome Advances Conference, London, December 2015.
225. BIONANOTOX, Greece, May 2016.
226. Canadian Society of Pharmaceutical Scientists Conference, Vancouver, Canada, May 2016.
227. CIMIT Meeting, Perugia, Italy, June 2016.
228. Central European Biomedical Congress, Krakow, Poland, June 2016.
229. Nanomedicien Meeting, Viterbo, Italy, September 2016.
230. Meeting on Nanocontainers, Tarragona, Spain, October 2016.
231. Pharmaceutica 2017, London, UK, March 2017.
232. BIONANOTOX, Heraklion, Greece, May 2017.
233. Nanodelivery 2017, Osaka, Japan, May 2017.
234. Drug Disacovery and Therapy World Congress, Boston, July 2017.
235. Drug Delivery and Formulation Summit, Boston, August 2017.
236. YUCOMAT 2017, Montenegro, September 2017.
237. Liposome Advances, Athens, September, 2017.
238. 21st International Symposium on Microencapsulation, Faro, Portugal, September 2017.
239. World Congress on Pharmacology and Chemistry of Natural Compounds, Tbilisi, Georgia, October 2017.
240. 4th European Biopharma Congress, Vienna, Austria, November 2017.
241. 9th Global Drug Delivery and Formulation Summit, Berlin, Germany, March 2018.
242. 16th International Conference on Pharmaceutics and Novel Drug Delivery Systems, Berlin, Germany, March 2018.
243. AAPS-NERDG Meeting, Farmington, CT, April 2018.
244. BIONANOTOX, Greece, May 2018.
245. Global Conference on Pharmaceutics and Drug Delivery Systems, Rome, Italy, June 2018.
246. 8th Forum on New Materials, Perugia, Italy, June 2018.
247. World Preclinical Congress, Boston, June 2018.
248. 12th International Conference on Nanopharmaceutics and Advanced Drug Delivery, Dublin, Ireland, August 2018.
249. Frontiers in Delivery of Therapeutics, Tartu, Estonia, August 2018.
250. YUCOMAT 2018, Montenegro, September 2018.
251. Material Science-2018, Amsterdam, The Netherlands, October 2018.
252. 21st European Biotechnology Congress, Moscow, Russia, October 2018.
253. Pharmaceutics and Novel Drug Delivery Systems, Moscow, Russia, October 2018.
254. Applied Pharmaceutical Nanotechnology, Boston, October 2018.
255. 2nd International Conference on Pharmaceutical Nanotechnology and Nanomedicine, New York, March 2019
256. 6th World Summit on Cancer Research and Therapy, Dubai, UAE, April 2019
257. BIONANOTOX, Greece, May 2019
258. 3rd Global Conference on Pharmaceutics and Drug Delivery Systems, Paris, France, June 2019
259. International Cancer Conference, London, UK, June 2019.
260. INVITE Conference, March 2022, Germany
261. Global Summit on Pharmaceutics and Drug Delivery Systems, Munich, Germany, May 2022.
262. Global Summit and Expo on Materials Science and Engineering, Munich, Germany, May 2022
263. Liposome Research Days, Vancouver, Canada, June 2022.
264. CIMTEC, Perugia, Italy, June 2022.
265. 2022 YUCOMAT, Montenegro, August 2022.

266. ENDOCYTE conference, Berlin, Germany, September 2022.
267. Applied Science, Paris, France, October 2022.
268. 2023 YUCOMATE, Montenegro, September 2023.

Invited Lectures and Seminars at:

1. University of California, San Francisco - 1977
2. University of Florida, Gainesville - 1978
3. Medical Institute, Vladimir (Russia) - 1979
4. Assoreni, Rome (Italy) - 1979
5. Martin Luther University, Halle (Germany) - 1980
6. University of Rome (Italy) - 1981
7. Assoreni, Rome (Italy) - 1981
8. Institute of Biochemistry, Tashkent (Uzbekistan) - 1981
9. Institute of Biochemistry, Kiev (Ukraine) - 1981
10. Institute of Biochemistry, Minsk (Belorussia) - 1981
11. Martin Luther University, Halle (Germany) - 1982
12. Iozef Stefan Institute, Ljubljiana (Slovenia) -1983
13. Belgrade University (Yugoslavia) - 1983
14. University of Bombay (India) - 1984
15. Volgograd Medical Institute (Russia) - 1985
16. Institute of Biochemistry, Kiev (Ukraine) - 1986
17. Institute of Organic Chemistry, Mainz (Germany) - 1986
18. Institute of Chemistry, Alma-Ata (Kazakhstan) - 1987
19. ORIS, Paris (France) - 1988
20. Far East Center of USSR Academy of Sciences, Vladivostok - 1988
21. University of Frunze (Kirgizia) - 1988
22. Institute of Macromolecular Chemistry, Prague (Czech Republic) - 1988
23. University of Groningen (Netherlands) - 1988
24. Institute of Physics, Havana (Cuba) - 1989
25. Academy of Medical Sciences, Havana (Cuba) - 1989
26. Royal Free Hospital, London (UK) - 1990
27. University of Voronez (Russia) - 1990
28. University of Illinois, Chicago - 1991
29. University of Texas M.D.Anderson Cancer Center - 1991
30. University of Utah - 1991
31. CEADEN, Havana (Cuba) - 1991
32. University of Washington, Seattle - 1992
33. University of California, San Francisco - 1992
34. Amgen - 1992
35. University of Alberta, Edmonton (Canada) - 1993
36. Northeastern University, Boston - 1993
37. University of Pittsburgh - 1994
38. University of Shizuoka (Japan) - 1994
39. Daiichi Corporation, Tokyo (Japan) – 1994
40. Suffolk University, Boston - 1994
41. Nextar - 1995
42. Technical University of Munich (Germany) - 1995
43. Mallinkrodt - 1995
44. Amgen - 1995
45. Center of Pharmaceutical Education, Akhmedabad (India) - 1996

46. Northeastern University, Boston - 1996
47. Centocor - 1997
48. MIT, Department of Chemical Engineering - 1997
49. Procyon (Canada) - 1997
50. MGH, Department of Radiation Oncology - 1997
51. University of Rio de Janeiro (Brazil) - 1997
52. Institute of Macromolecules, Rio de Janeiro (Brazil) - 1997
53. University of Padova (Italy) - 1997
54. Northeastern University, Boston - 1997
55. Aronex - 1998
56. University of Texas M.D.Anderson Cancer Center - 1998
57. University of Campinas, Department of Chemistry (Brazil) - 1998
58. University of Campinas, Department of Pharmacology (Brazil) - 1998
59. University of San Paulo in San Carlos, Institute of Chemistry (Brazil) - 1998
60. University of Utah - 1998
61. IDEXX - 1998
62. MIT, Department of Chemical Engineering - 1998
63. Martin Luther University, Halle (Germany) - 1998
64. University of Marburg (Germany) - 1998
65. Baxter – 1999
66. University of Nebraska Medical Center – 1999
67. University of Pennsylvania Medical Center – 1999
68. BASF – 2000
69. M.D.Anderson Cancer Center – 2001
70. Roxbury Comminity College – 2001
71. Department of Biology, Northeastern University – 2002
72. University of Minnesota Medical Center – 2002
73. Department of Pharmaceutics, Rutgers, University of New Jersey – 2002
74. Tufts University – 2003
75. Department of Physics, Northeastern University – 2004
76. Washington University – 2004
77. Institute of Biophysics, Academia Sinica – 2004
78. University of Utah – 2004.
79. University of Massachusetts, Lowell – 2004.
80. M.D.Anderson Cancer Center, Houston – 2005.
81. Auburn University, Auburn – 2005.
82. University of Wisconsin, Madison – 2006.
83. University of North Carolina, Chapel Hill – 2006.
84. University of Nebraska, Omaha – 2006.
85. University of Pennsilvania, Philadelphia – 2006.
86. University of Iowa, Iowa City – 2006.
87. Abbott – 2007
88. Biogen Idec – 2007.
89. Stevens Institute of Technology, New Jersey – 2007.
90. Institute of Molecular Pharmacology, Berlin, Germany – 2007.
91. University of Montreal – 2008.
92. Albany College of Pharmacy – Albany, 2008.
93. University of Barcelona, Spain – 2008.
94. University of Washington, Seattle – 2008.
95. Enzon Corp. – 2008.
96. Emory University, Atlanta – 2008.

97. Purdue University, West Lafayette – 2008.
98. Tempo Pharmaceuticals, Boston – 2008.
99. University of North Dakota, Fargo – 2008.
100. Wolfe Laboratories, Boston – 2008.
101. CIMIT (Beth Israel Deaconess Hospital), Boston – 2009.
102. University of Maryland – 2009.
102. University of North Carolina – 2009.
103. Eisai Co. – 2009.
104. University of Pennsilvania – 2010.
105. University of Tennessee, Memphis – 2010.
106. Pfizer – 2010.
107. Roche – 2010.
108. MIT – 2010.
109. Ben Gurion University, Beer Sheba, Israel – 2011.
110. RTI, North Carolina – 2013.
111. University of Kentucky – 2013.
112. University of Missoury, Kansas City – 2014.
113. King Abdulla University of Science and Technology, Saudi Arabia – 2014.
114. Technion, Israel – 2015.
115. King Abdulaziz University, Saudi Arabia – 2015.
116. York University, Toronto, Canada - 2015.
117. Catalan University, Barcelona, Spain – 2015.
118. University of South Paris, France – 2016.
119. Center for Atomic Energy, France – 2016.
120. Shubnikov Crystallography Institure, Russian Academy of Sciences, Russia – 2017.
121. Russian Cardiology Center, Russia – 2018.
122. University of Pennsilvania – 2019.
123. University of Massachusetts Lowell – 2022.
124. University of Texas Health Rio Grande Vallye – 2022.
125. Georgia State University – 2022.

Patents:

1. USSR Patent #568662 (1977)
   Method for the preparation of encapsulated ionites.
   Inventors: **V.P. Torchilin,** A.V. Smirnov, O.N. Mertvyzhina, G.V. Gryaznov, A.M. Klibanov, K. Martinek, I.V. Berezin
2. USSR Patent #586182 (1977)
   Method for the preparation of immobilized amilase.
   Inventors: **V.P. Torchilin**, S.B. Makarova
3. USSR Patent #677415 (1977)
   Method for the preparation of polysaccharide derivatives of heparin.
   Inventors: **V.P. Torchilin**, E.G. Tischenko, R.A. Markosyan, V.N. Smirnov
4. UK Patent #2003603 (1978)
   Method and apparatus for producing by ultrasonics a visible image of an object.
   Inventors: I.V. Berezin, V.S. Goldmacher, K. Martinek, A.A. Mishin, G.P. Samokhin, V.N. Smirnov, **V.P. Torchilin**, E.I. Chazov, A.M. Klibanov
5. France Patent #7821419 (1979)
   Procede d'obteniton de l'image visible d'un objet et dispositif pour sa mise en oeuvre.
   Inventors: I.V. Berezin, V.S. Goldmakher, A.M. Klibanov, K. Martinek, A. A. Mishin, G.P. Samokhin, V.N. Smirnov, **V.P. Torchilin,** E.I. Chazov

6. USSR Patent #671285 (1979)
Method for the preparation of water soluble compounds of proteolytic enzymes.
Inventors: **V.P.Torchilin**, E.V. Il'ina, V.N. Smirnov, E.I. Chazov

7. USSR Patent #722124 (1979)
Method for the preparation of polymeric derivatives of insulin.
Inventors: **V.P. Torchilin**, E.G. Tischenko, E.V. Il'ina, V.N. Smirnov

8. USSR Patent #824053 (1980)
Method for determining the rate of fibrin clot lysis.
Inventors: E.V. Il'ina, E.G. Tischenko, **V.P. Torchilin**

9. USSR Patent #759947 (1980)
Method and device for obtaining the visible imaging of an object.
Inventors: I.V. Berezin, V.S. Goldmakher, K. Martinek, A.M. Klibanov, A.A. Mishin, G.P. Samokhin, **V.P. Torchilin**, V.N. Smirnov, E.I.Chazov

10. USSR Patent #798660 (1980)
Radiation detector.
Inventors: I.V. Berezin, V.S. Goldmakher, K. Martinek, A.M. Klibanov, A.A. Mishin, G.P. Samokhin, **V.P. Torchilin**, V.N. Smirnov, E.I.Chazov

11. USSR Patent #770495 (1980)
Method for the treatment of thromboses.
Inventors: A.V. Mazaev, **V.P. Torchilin**, B.S. Lebedev, V.N. Smirnov E.I. Chazov

12. USSR Patent #946038 (1980)
Thrombin derivatives possessing coagulative activity, and method for their preparation.
Inventors: **V.P. Torchilin**, E.V. Il'ina, A.V. Mazaev, V.N. Smirnov

13. USSR Patent #790785 (1980)
Method for the preparation of immobilized streptokinase.
Inventors: E.I. Chazov, V.N. Smirnov, **V.P. Torchilin,** B.V. Moskvichev, G.M. Grinberg, A.Sh. Skuya, G.I. Kleiner

14. USSR Patent #892971 (1981)
Stablilized cholesteroloxidase - thermostable biocatalyst of cholesterol transmutation.
Inventors: A.V. Maksimenko, E.G. Tischenko, **V.P. Torchilin**, V.N. Smirnov

15. USSR Patent #822551 (1981)
Immobilized streptokinase possessing thrombolytic activity.
Inventors: E.I. Chazov, V.N. Smirnov, **V.P. Torchilin**, B.V. Moskvichev, I.M. Tereshin, B.V. Moskvichev

16. US Patent #4257269 (1981)
Method and apparatus for producing by ultrasonics a visible image of an object.
Inventors: I.V. Berezin, V.S. Goldmacher, K. Martinek, A.A. Mishin, G.P. Samokhin, V.N. Smirnov, **V.P. Torchilin**, E.I. Chazov, A.M. Klibanov

17. FRG Patent #3032606 (1981)
Polysaccharidderivat der streptokinase, verfahren zu dessen hersiellung und anwendung.
Inventors: E.I. Chazov, V.N. Smirnov, **V.P. Torchilin**, I.M. Tereshin, B.V. Moskvichev

18. FRG Patent #3033030 (1981)
Termostabiles derivat der urokinase und verfahren zu dessen herstellung.
Inventors: A.V. Maksimenko, **V.P. Torchilin**, E.I. Chazov

19. Sverige Patent #78079688 (1982)
Forfarande och anording for astadkommande av en synlig bild av ett foremal.
Inventors: I.V. Berezin, V.S. Goldmakher, A.M. Klibanov, K. Martinek, A.A. Mishin, G.P. Samokhin, V.N. Smirnov, **V.P. Torchilin,** E.I. Chazov

20. FRG Patent #2831782 (1982)
Verfahren zur erzeugung eines sichtbaren bildes von einem objekt und anlage zu desse realisierung.

Inventors: I.V. Berezin, V.S. Goldmacher, K. Martinek, A.A. Mishin, G.P. Samokhin, V.N. Smirnov, **V.P. Torchilin**, E.I. Chazov, A.M. Klibanov

21. FRG Patent #3150318 (1982)
Verfahren zur herstellung eines polysaccharaidderivats des fibrinolysins.
Inventors: E.I. Chazov, V.N. Smirnov, **V.P. Torchilin**, I.M. Tereshin, B.V. Moskvichev, G.M. Grinberg, A.Z. Skuya, G.I. Kleiner
22. US Patent #4349630 (1982)
Heat-resistant water soluble urokinase derivative.
Inventors: A.V. Maximenko, **V.P. Torchilin,** V.N. Smirnov, E.I. Chazov
23. USSR Patent #938617 (1982)
Stabilized urokinase possessing thrombolytic activity.
Inventors: A.V. Maksimenko, **V.P. Torchilin**, V.N. Smirnov, E.I. Chazov
24. USSR Patent 1002356 (1982)
Method for the preparation of immobilized fibrinolysin possessing prolonged thrombolytic activity.
Inventors: E.I. Chazov, V. N. Smirnov, **V.P. Torchilin**, I.M. Tereshin, B.V. Moskvichev, G.M. Grinberg, A.Sh. Skuya, G.I. Kleiner
25. USSR Patent #1022988 (1983)
Urokinase stabilized derivatives possessing thrombolytic activity and method for their preparation.
Inventors: A.V. Maksimenko, **V.P. Torchilin**, V.N. Smirnov, E.I. Chazov
26. USSR Patent # 1018634 (1983)
Method for the treatment of eye haemorrhage.
Inventors: R.A. Gundorova, A.D. Romaschenko, V.P. Makarova, **V.P. Torchilin**, A.V. Mazaev, V.N. Smirnov, E.I. Chazov
27. USSR Patent #1037633 (1983)
Method for the preparation of modified urokinase.
Inventors: A.V. Maksimenko, **V.P. Torchilin**, V.V. Kukhartchuk, O.S. Medvedev, P.M. Leschinsky, G.G. Arabidze, V.N. Smirnov
28. USSR Patent #1137760 (1983)
Urokinase immobilized on heparin.
Inventors: A.V. Maksimenko, **V.P. Torchilin,** E.G. Tischenko, V.N. Smirnov
29. USSR Patent #1141336 (1984)
Method for the determination of antibodies to glicolipids.
Inventors: G.P. Vlasov, **V.P. Torchilin**, T.A. Gremyahkova, V.G. Likhoded, M.D. Korosteleva, N.N. Ivanov
30. USSR Patent #1128601 (1984)
Urokinase immoblilized on fibrinogen.
Inventors: A.V. Maksimenko, E.G. Tischenko, **V.P. Torchilin**, V.N. Smirnov, E.I. Chazov
31. US Patent #4446316 (1984)
Dextran derivative of fibrinolysin.
Inventors: E.I. Chazov, V.N. Smirnov, **V.P. Torchilin**, I.M. Tereshin, B.V. Moskvichev, G.M. Grinberg, A.Z. Skyua, G.I. Kleiner
32. USSR Patent #1309980 (1985)
Method for the treatment of eye haemorrhage.
Inventors: R.A. Gundorova, A.D. Romaschenko, N.S. Khodzhaev, A.V. Mazaev, **V.P. Torchilin**, V.P. Bykov
33. USSR Patent #1301406 (1986)
Liposomal vesicle for drug targeting of biologically active compounds.
Inventors: S.A. Burkhanov, **V.P. Torchilin**, G.A. Ermolin, V.E. Kotelyansky, E.E. Efremov, I.N. Trakht, A.L. Klibanov, A.N. Lukyanov

34. US Patent #4564596 (1986)
Urokinase derivatives covalently bound to fibrogen.
Inventors: **V.P. Torchilin**, A.V. Maksimenko, E.G. Tischenko, V.N.Smirnov, E.I. Chazov

35. Sverige Patent #85000933 (1986)
Urokinas derivat bestaende av urokonas bundet till fibrinogen.
Inventors: A.V. Maximenko, E.G. Tischenko, **V.P. Torchilin,** V.N. Smirnov, E.I. Chazov

36. USSR Patent #1371004 (1987)
Method for the preparation of immobilized urokinase.
Inventors: B.V. Moskvichev, T.M. Taratina, G.P. Ivanova, E.D. Kostin, **V.P. Torchilin**

37. US Patent #5223242 (1993)
Negatively charged specific affinity reagents.
Inventors: B.A. Khaw, **V.P. Torchilin,** A.L.Klibanov

38. US Patent #5534241 (1996)
Amphipathic polychelating compounds and method of use.
Inventors: **V.P.Torchilin**, V.S.Trubetskoy, G.L.Wolf

39. US Patent #5567410 (1996)
Compositions and methods for radiographic imaging.
Inventors: **V.P.Torchilin**, V.S.Trubetskoy, S.Gazell, G.L.Wolf

40. US Patent #5780033 (1998)
Use of autoantibodies for tumor therapy and prophylaxis.
Inventors: **V.P.Torchilin**, L.Z.Iakoubov

41. US Patent #5746998 (1998)
Targeted co-polymers for radiographic imaging.
Inventors: **V.P.Torchilin**, V.S.Trubetskoy, S.Gazell, G.L.Wolf

42. US Patent #5756069 (1998)
Amphipathic polychelating compounds and method of use.
Inventors: **V.P.Torchilin**, V.S.Trubetskoy, G.L.Wolf

43. US Patent #5780052 (1998)
Compositions and methods useful for inhibiting cell death and for delivering an agent into cell.
Inventors: B.A.Khaw, **V.P.Torchilin**, J.Narula, I.Vural

44. US Patent #5993818 (1999)
Use of antibodies for tumor therapy and prophylaxis
Inventors: **V.P.Torchilin**, L.Z.Iakoubov

45. US Patent #6875423 (2005)
Methods for increasing peripheral blood circulation
Inventors: M.Intaglietta, **V.P.Torchilin**, V.S.Trubetskoy, A.G.Tsai

45. US Patent #7,279,326 (2007)
Copmposition for delivery of a mitochondrial genome to a cell
Inventors: V.Weissig, **V.P.Torchilin**

47. Application 60/368,913 (2002)
Micelles from polymer-lipid conjugates with incorporated anti-cancer drugs
Inventors: **V.P.Torchilin**, A.N.Lukyanov, Z.Gao

48. Application 60/368,546 (2002)
Targeted micelles for delivery of pharmaceuticals
Inventors: **V.P.Torchilin**, A.N.Lukyanov, Z.Gao

49. Application 60/356,526 (2002)
Intracellular delivery of drugs and DNA
Inventors: **V.P.Torchilin**, R.Rammohan, T.Levchenko, N.Volodina

50. Application 60/403,797 (2002)
Cell organelle transplantation
Inventors: **V.P.Torchilin**, V.Weissig

51. Application 11/885,491 (2004)
Mitochondriotropic Phospholipid Vesicles
nventors: V.Weissig, S.Boddapati, R.Hanson, **V.P.Torchilin**
52. Application 10/503,776 (2005)
Intracellular delivery of therapeutic agents
Inventors: **V.P.Torchilin** et al.
53. Application 10/553612 (2005)
Micelle delivery system loaded with a pharmaceutical agent
Inventors: **V.P.Torchilin** et al.
54. Application PCT US/08/08326 (2006)
Mixed micelles and uses thereof
Inventors: **V.P.Torchilin**
55. Application 60/832,085 (2007)
Immunotherapy with microparticles
Inventors: **V.P.Torchilin**, D.Mongayt, L.Iakoubov
56. Application 11/879,017 (2007)
Condition-dependent, multiple target delivery system
Inventors: **V.P.Torchilin**
57. Application (2007)
Delivery of siRNA
Inventors: **V.P.Torchilin** et al.
58. Application 60/959,728 (2007)
Stable nanocolloids of poorly soluble drugs
Inventors: **V.P.Torchilin**, Yu.Lvov, et al.
59. Application 61/163.145 (2008)
Stable aqueous nanocolloids of paclitaxel and atavoquone
Inventors: Yu.Lvov, **V.P.Torchilin**, et al.
60. Application PC/US08/012660
Self-assembling micelle-like nanoparticles for DNA delivery
Inventors: Y.Ko, A.Kale, **V.P.Torchilin**
61. Application 61/225,298 (2009)
siRNA-phospholipid conjugate
Inventors: **V.P.Torchilin**, T.Musacchio
62. Application 61/225,298 (2009)
Ascorbate-decorated nanosystems for targeted brain delivery
Inventors: S.Salmaso, **V.P.Torchilin**, et al.
63. Application 61/239,145 (2009)
Multi-biomarker biosensor
Inventors : A.Busnania, **V.P.Torchilin**, et al.
64. US Patent 8,685,538 as of 4/1/2014
Stable polyelectrolyte coated nanoparticles
Inventors : **V.P.Torchilin** et al.

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