### **CURRICULUM VITAE**

# Tamara Minko, Ph. D. Distinguished Professor and Chair

Department of Pharmaceutics

Ernest Mario School of Pharmacy

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http://en.wikipedia.org/wiki/Tamara\_Minko
Executive Editor, Advanced Drug Delivery Reviews http://www.journals.elsevier.com/advanced-drug-

delivery-reviews/editorial-board/

Editor, Pharmaceutical Research http://www.pharmres.org

Google Scholar http://scholar.google.com/citations?user=G7\_qz4kAAAAJ

**Personal:** 

Citizenship: United States
Marital status: Married, one son

## **Professional Profile and Current Research Interests:**

Tamara Minko is a Distinguished Professor and Chair of the Department of Pharmaceutics at Rutgers, The State University of New Jersey, a member of the Cancer Institute of New Jersey and Environmental and Occupational Health Sciences Institute. Dr. Minko's current research interests include nanoscale-based targeted delivery of drugs, peptides, siRNA and antisense oligonucleotides in order to enhance the efficiency of treatment and imaging; nanomedicine; nanoparticle formulation, characterization and testing; preclinical in vitro and in vivo evaluation of anticancer therapeutics; orthotopic and ectopic animal models of cancer, lung diseases and fibrosis; personalized medicine; hypoxia; mechanisms of multidrug resistance and their suppression; intracellular fate and molecular mechanisms of action of drugs; pharmacokinetics and pharmacodynamics. She is an author and co-author of more than 400 publications (peer-reviewed papers, books and textbook chapters, conference proceedings/abstracts, and patents). Many of her papers are well cited and published in prestigious journals with high impact factors including PNAS, Nature Nanotechnology, Cancer Research, Clinical Cancer Research, Advanced Drug Delivery Review, Journal of Controlled Release, Small, ACS Nano, etc. Dr. Minko is a Fellow of AAPS, CRS and AIMBE, recipient of numerous awards, Executive Editor of Advanced Drug Delivery Reviews, Editor of Pharmaceutical Research, member of editorial board of ten scientific journals and a member of Study Sections at NIH, DOD, American Heart Association and other national and international review panels. Her research is supported by grants from NIH, NSF, DOD and other national and international sources.

# **Appointments, Affiliations and Experience:**

Distinguished Professor, Department of Pharmaceutics, Ernest Mario School of Pharmacy, Rutgers, The State University of New Jersey, Piscataway, New Jersey, 2011 - Present

Chair, Department of Pharmaceutics, Ernest Mario School of Pharmacy, Rutgers, The State University of New Jersey, Piscataway, New Jersey, 2008 – Present

Acting Director, The Graduate Program in Pharmaceutical Science, Rutgers, The State University of New Jersey, 2008-2008

Professor, Department of Pharmaceutics, Ernest Mario School of Pharmacy, Rutgers, The State University of New Jersey, Piscataway, New Jersey, 2007 - 2011

Associate Professor, Department of Pharmaceutics, Ernest Mario School of Pharmacy, Rutgers, The State University of New Jersey, Piscataway, New Jersey, 2003-2007

Assistant Professor, Department of Pharmaceutics, Ernest Mario School of Pharmacy, Rutgers, The State University of New Jersey, Piscataway, New Jersey, 2000-2003

Member, Graduate Programs: Pharmaceutical Science and Chemical and Biochemical Engineering, Rutgers, The State University of New Jersey, Piscataway, New Jersey, 2000-Present

Member, Cancer Institute of New Jersey, New Brunswick, New Jersey, 2000-Present

Member, Environmental and Occupational Health Science Institute (EOSHI), Piscataway, NJ, 2000-Present

Adjunct Assistant/Associate Professor, Department of Pharmaceutics and Pharmaceutical Chemistry, College of Pharmacy, University of Utah, Salt Lake City, Utah, 2000-2007.

Research Assistant Professor, Department of Pharmaceutics and Pharmaceutical Chemistry, College of Pharmacy, University of Utah, Salt Lake City, Utah, 1999-2000

Research Associate, Department of Pharmaceutics and Pharmaceutical Chemistry, College of Pharmacy, University of Utah, Salt Lake City, Utah, 1997-1998

Senior Research Specialist, Department of Cardiovascular Genetics, College of Medicine, University of Utah, Salt Lake City, Utah, 1994-1996

Senior Scientific Officer (corresponds to the Associate Professor in the USA), Institute of Physiology, Ukrainian Academy of Sciences, Kiev, Ukraine, 1988-1993

Scientific Officer (corresponds to the Assistant Professor in the USA), Institute of Physiology, Ukrainian Academy of Sciences, Kiev, Ukraine, 1986-1988

Junior Scientific Officer, Institute of Physiology, Ukrainian Academy of Sciences, Kiev, Ukraine, 1984-1986

Ph.D. Graduate Student, Institute of Physiology, Ukrainian Academy of Sciences, Kiev, Ukraine 1980-1984 Lecturer, College of Nursing, Kiev, Ukraine 1977-1980

## **Education:**

Postdoctoral Training, Pharmaceutics and Pharmaceutical Chemistry, Department of Pharmaceutics and Pharmaceutical Chemistry, College of Pharmacy, University of Utah, Salt Lake City, Utah, 1997-1998 (Advisor – Jindrich Kopecek, Ph.D., D.Sc., Professor and Chair).

Postdoctoral Training, Cellular and Molecular Biology, Department of Cardiovascular Genetics, School of Medicine, University of Utah, Salt Lake City, Utah, 1994-1996 (Advisor – Roger Williams, M.D., Professor and Chair).

Ph.D., Physiology (Cellular and Molecular), Institute of Physiology Ukrainian Academy of Sciences, Ukraine, 1984 (Advisor – Asya Z. Kolchinskaya, M.D., Ph.D., D.Sc., Professor and Chair).

M.S., Biochemistry (honor), Mordovsky State University, Russia, 1977 (Advisor – Nonna V. Alba, Ph.D., Professor).

## **Research Support:**

## Ongoing

- 1. 04/01/2014 03/31/2020 NIH/NCI R01 CA175318 T. Minko Co-Investigator. A Nanotechnology Platform for Suicide Gene Therapy of Recurring Ovarian Cancer. Total \$1,772,855 (Direct \$1,143,750; Indirect -\$629,065). A. Hatefi Principal Investigator.
- 2. 01/01/2014 12/31/2017. NIH/NHLBI R01 HL118312 T. Minko Principal Investigator. Nanotechnology Approach for Inhalation Treatment of Pulmonary Fibrosis. Total \$1,842,195 (Direct \$1,211,116; Indirect -\$631,079).
- 3. 07/01/10 05/31/16. NIH/NCI R01 CA138533, T. Minko Principal Investigator. Multifunctional Nanotherapeutics for Cancer Treatment and Imaging. Total \$1,605,843 (Direct \$1,153,700; Indirect \$452,143).

## Completed

- 1. 08/01/10 07/31/2015. NIH/NCI U54 CA151881, T. Minko Principal Investigator. Combination Nanotherapeutic Strategies to Overcome Tumor Drug Resistance. Total \$1,331,095 (Direct \$956,310; Indirect \$374,784).
- 2. 07/01/12 12/31/14. Busch Biomedical Research Grant, T. Minko Co-Investigator. Microenvironment and Phenotypic Outcome in Cystic Fibrosis Repair. (Principal Investigator Dr. M. Gordon, Department of Pharmacology and Toxicology, EMSOP, Rutgers University). Total \$50,000.
- 3. 12/01/09 11/30/13. National Science Foundation CBET 0933966, T. Minko Co-Principal Investigator. Novel Self Assembly of siRNA for Efficient and Safe Delivery. (Principal Investigator Dr. H. He, Department of Chemistry, Newark, Rutgers University). Total \$125,000 (Direct \$80,906, Indirect \$44,094).
- 4. 04/07/06 02/28/13. NIH/NCI R01 CA111766, T. Minko Principal Investigator. Molecular targeting of drug delivery system to cancer. Total \$1,338,205 (Direct \$868,912; Indirect \$471,293).
- 5. 08/01/09 07/31/12. NIH/NCI (ARRA) R01 CA100098, T. Minko Principal Investigator, Targeted Proapoptotic Anticancer Drug Delivery System. Total \$862,283 (Direct \$645,958; Indirect \$216,325).
- 6. 07/01/09 06/30/12. NIH/NIBIB R01 EB008278, T. Minko Co-Investigator. Efficient Cellular Delivery of Oligonucleotides. (Principal Investigator Dr. C. M. Roth, Department of Chemical & Biochemical Engineering, Rutgers University). (Minko budget \$30,000).
- 7. 09/15/06 06/30/11. NIH/NIBIB R01 EB007049, T. Minko Co- Principal Investigator. Carrier Shape Matters: Filomicelles, Long-circulation, and the EPR effect. (Principal Investigator Dr. D. Discher, University of Pennsylvania). Total (Minko's budget) \$306,762 (Direct –\$198,704; Indirect \$108,048).
- 8. 07/01/10 06/30/11. Department of Defense Lung Cancer Research Program W81XWH-10-1-0347, T. Minko Co-Investigator (Principal Investigator Dr. O. Taratula, Postdoctoral Research Associate working under the supervision of Dr. Minko). Innovative Strategy for Treatment of Lung Cancer: Inhalatory Co-Delivery of Anticancer drugs and siRNA for Suppression of Cellular Resistance. Total \$114,248 (Direct \$75,000, Indirect \$39,248).
- 9. 07/07/04 07/31/09. NIH/NCI R01 CA100098, T. Minko Principal Investigator, Targeted Proapoptotic Anticancer Drug Delivery System. Total \$1,000,872 (Direct \$643,648; Indirect \$357,224).

- 10. 12/01/06 09/30/10. United States Israel Binational Science Foundation (BSF) grant # 2005237, T. Minko US Principal Investigator, Dr. A. Rubinstein Israel Principal Investigator. Targeting Neoplastic Tissues with Multifunctional Saccharidic Platforms Loaded with Model Anticancer Peptides: A New Approach in Adjuvant Treatment of Microscopic Diseases. Total (Minko's budget) \$34,700 (Direct \$30,180, Indirect \$4,520).
- 11. 4/01/07 06/30/09. The American Lung Association of New Jersey, LCD-23812-N, T. Minko Principal Investigator. Novel Inhalatory Treatment of Resistant Lung Cancer. Total \$120,000 (Direct \$120,000).
- 12. 11/01/08 10/31/09. Department of Defense Breast Cancer Research Program, T. Minko Principal Investigator of subcontract. Nanospheric Chemotherapeutic and Chemoprotective Agents. (Principal Investigator Dr. L. Sheihet, Department of Chemistry, New Brunswick, Rutgers University). Total (Minko's budget) \$35,000 (Direct \$35,000).
- 13. 03/01/08 09/01/08. Enzon Pharmaceuticals, Inc., T. Minko Principal Investigator. *In vitro* and *in vivo* evaluation of novel anticancer compounds. Total \$20,000 (Direct \$12,945; Indirect \$7,055).
- 14. 09/15/04 08/31/07. NIH/NIBIB R21 EB004000-02, T. Minko Co- Principal Investigator. Worm-like Micelles for Targeted Delivery and Imaging. (Principal Investigator Dr. D. Discher, University of Pennsylvania). Total (Minko's budget) \$70,000 (Direct \$45,000; Indirect \$25,000).
- 15. 08/01/06 07/30/07. New Jersey Commission on Science and Technology, T. Minko Principal Investigator. Treatment of Ovarian Cancer by Intra-abdominal Application of Core-only and Core-shell Nanoparticles with Targeting Peptides Carrying Cargoes of Chemotherapeutics. Total \$15,000 (Direct \$15,000).
- 16. 12/15/05 12/14/06. ALZA Corporation, T. Minko Principal Investigator. Antitumor Activity of Liposomal Prodrug of Mitomycin C. Total \$80,000 (Direct \$63,492; Indirect \$16,508).
- 17. 04/01/04 03/31/05. Enzon Pharmaceuticals, Inc., T. Minko Principal Investigator EPR effect of pegylated conjugates. Total \$100,000 (Direct \$90,910; Indirect \$9,090).
- 18. 07/01/03 06/30/05. The American Lung Association, RG-156-N, T. Minko Principal Investigator. Enhancement of the efficacy of chemotherapy for lung cancer by simultaneous suppression of multidrug resistance and antiapoptotic cellular defense. Total \$70,000 (Direct \$70,000).
- 19. 09/01/04 08/31/05, NIH R21 EB003164-01, T. Minko Co- Principal Investigator, CD47-Display on Nanomaterials a New Approach to Inhibiting Phagocytosis. (Principal Investigator Dr. D. Discher, University of Pennsylvania). Total \$49,762 (Direct \$32,001; Indirect \$17,761).
- 20. 02/15/03 02/14/05. NMHEMC Research Foundation, T. Minko Principal Investigator. Characterization of genetic adaptation to life at high altitude: Adaptation to chronic hypoxia, relevance to disease at sea level. Total \$20,000 (Direct \$20,000).
- 21. 07/01/03 06/30/05. New Jersey State Commission on Cancer Research, T. Minko Co-Investigator. Prevention of Carboplatin Drug Resistance by Selenium. (Principal Investigator Dr. L. Rodriguez-Rodriguez, The Cancer Institute of New Jersey). Total \$10,000 (Direct \$10,000).
- 22. 03/01/04 12/31/04. Baxter Healthcare Corp., T. Minko Principal Investigator. A novel technology to combine anticancer drugs in a least invasive and a cost-effective manner. Total \$5,000 (Direct \$5,000).

- 23. 07/01/02 06/30/03. The Cancer Institute of New Jersey, T. Minko Principal Investigator, Combination of Bcl-2 antisense oligonucleotides and doxorubicin-potential use in the therapy of breast cancer. Total \$25,000.
- 24. 07/01/01 06/30/03. Charles and Johanna Busch Fund, T. Minko Principal Investigator. Regulation of caspase-dependent signaling pathways of apoptosis by synthetic Bcl-2 homology 3 domain (BH3) peptide in prostate cancer cells. Total \$20,000.
- 25. 09/01/02 12/31/03. The Blanche and Irving Laurie Foundation, T. Minko Principal Investigator. Stem cell survival enhancement by suppression of proapoptotic cell death signal pathways. Total \$5,000.
- 26. 06/01/01 05/31/03. New Jersey Research Division of Physicians in Transplantation and Kidney Disease, T. Minko Principal Investigator. Influence of immumosuppressive agents on cellular viability and apoptosis in stem cells. Total \$5,000.
- 27. 07/01/02 12/31/03. NMHEMC Research Foundation, T. Minko Principal Investigator. To support research in T. Minko's laboratory. Total \$15,000.
- 28. 04/01/97 01/31/01. NIH R01 CA51578, T. Minko Co-Investigator. A polymeric drug delivery system for cancer therapy. (Principal Investigator Dr. J. Kopecek, University of Utah) Total \$1,115,261.
- 29. 04/01/93 03/31/94. NIH IHSEP-02, T. Minko<sup>†</sup> Principal Investigator from Europe (Dr. O. Appenzeller Principal Investigator from USA). Hypoxia, migraine and Lipin. Total \$100,000.

## Awards, Honors and Recognitions:

- 2015 New Jersey Health Foundation Excellence in Research Award.
- Fellow (Elected), Controlled Release Society (CRS), 2014 Present.
- Fellow (Elected), American Institute for Medical and Biological Engineering (AIMBE), 2014 Present.
- The paper V. Shah, O. Taratula, O. B. Garbuzenko, O. R. Taratula, L. Rodriguez-Rodriguez, T. Minko, "Targeted Nanomedicine for Suppression of CD44 and Simultaneous Cell Death Induction in Ovarian Cancer: an Optimal Delivery of siRNA and Anticancer Drug", Clin. Cancer Res., 19, 6193-6204 (2013) was highlighted at:
  - o http://www.fiercedrugdelivery.com/story/rutgers-team-delivers-rna-weaken-drug-resistant-ovarian-cancer/2013-12-11?utm\_medium=nl&utm\_source=internal
  - o http://www.medicalnewstoday.com/articles/269923.php
  - o http://www.futurity.org/breakthrough-may-help-ovarian-cancer-survival/
  - o http://www.sciencecodex.com/surviving\_ovarian\_cancer\_rutgers\_scientists\_attack\_drug\_resistant\_cancer\_cells-124437
  - o http://medicalxpress.com/news/2013-12-drug-delivery-successfully-deadly-ovarian.html
  - o http://www.sciencedaily.com/releases/2013/12/131209124111.htm
- The paper O. Taratula, A. Kuzmov, M. Shah, O. B. Garbuzenko, **T. Minko**, "Nanostructured lipid carriers as multifunctional nanomedicine platform for pulmonary co-delivery of anticancer drugs and siRNA, J Control Release, 171, 349-57 (2013) was highlighted at:
  - o http://news.rutgers.edu/news/inhalation-therapy-lung-cancer-shows-promise-rutgers-study/20130625#.Ufx8WW0w8TA.

<sup>†</sup> Dr. T. Minko's name appears as "Minyailenko" due to the change of the last name.

- o http://www.dotmed.com/news/story/12777.
- o http://survivornet.ca/en/news/lung\_cancer\_treatment\_may\_improve\_with\_new\_chemotherapy\_delivery \_system.
- Member (Elected), Board of Directors, Controlled Release Society, 2012 2014.
- Drug Delivery and Translational Research Outstanding Research Paper Award for Year 2011 (S. Betigeri, O. Garbuzenko, **T. Minko**), 2012.
- Rutgers 2012 Most Innovative Technology Award (T. Minko, O. Garbuzenko, M. Zhang, L, Rodriguez), 2012.
- The American Society of Health-System Pharmacists (ASHP) Research and Education Foundation Award (R. Savla, O. Taratula, O. Garbuzenko, T. Minko), 2012.
- Director-at-Large, Controlled Release Society, 2011 2014.
- Member (Elected), Board of Scientific Advisers, Controlled Release Society, 2011 2012.
- Controlled Release Society Outstanding Pharmaceutical Paper Award, (O. Taratula, M. Shah, O. Garbuzenko, **T. Minko**), 2011.
- The paper O. Taratula, O. B. Garbuzenko, A. M. Chen, **T. Minko**, "Innovative strategy for treatment of lung cancer: targeted nanotechnology-based inhalation co-delivery of anticancer drugs and siRNA, J. Drug Target., 19, 900-914 (2011) was highlighted at Nano Patents and Innovations, November 26, 2011 (http://nanopatentsandinnovations.blogspot.com/2011/11/silica-nanoparticles-for-lung-cancer.html).
- Research paper "Innovative Strategy for Treatment of Lung Cancer: Inhalatory Codelivery of Anticancer Drugs and siRNA for Suppression of Cellular Resistance" (O. Taratula, **T. Minko**) was highlighted at CDMRP Lung Cancer Research Highlights, 2011 (http://cdmrp.army.mil/lcrp/highlights.shtml#2\_11).
- Gallo Award for Scientific Excellence, The Cancer Institute of New Jersey for Outstanding Cancer Research (O. Garbuzenko, O. Taratula, **T. Minko**), 2011.
- Controlled Release Society Outstanding Pharmaceutical Paper Award, (O. Taratula, O. B. Garbuzenko, P. Kirkpatrick, I. Pandya, R. Savla, V. P. Pozharov, H. He, **T. Minko**), 2010.
- Member (Elected), Board of Scientific Advisors, Controlled Release Society, 2010-2012.
- The paper O. B. Garbuzenko, M. Saad, V. P. Pozharov, K. R. Reuhl, G. Mainelis, **T. Minko**. Inhibition of lung tumor growth by complex pulmonary delivery of drugs with oligonucleotides as suppressors of cellular resistance, Proc. Natl. Acad. Sci. USA, 107, 10737-10742 (2010) was highlighted in PNAS Media Selections (http://www.pnas.org/site/misc/current.shtml#lung); EurekAlert! (http://chinese.eurekalert.org/en/pub\_releases/2010-05/potn-052110.php); DOTMED NEWS (http://www.dotmed.com/news/story/12777/); NewScientist Magazine (http://www.newscientist.com/article/mg20627623.800-inhale-lung-chemo-to-limit-organ-damage.html); Ecancermedicalscience (http://www.ecancermedicalscience.com/news-insider-news.asp?itemId=1049).
- New Jersey Pharmaceutical Association for Science and Technology 2010 Student Scholarship Award (M. Zhang, Graduate Student of **T. Minko**), 2010.
- Fellow (Elected), American Association of Pharmaceutical Scientists (AAPS), 2009 Present.
- The paper A. M. Chen, M. Zhang, D. Wei, D. Stueber, O. Taratula, **T. Minko**, H. He, Co-delivery of Doxorubicin and Bcl-2 siRNA by Mesoporous Silica Nanoparticles Enhances the Efficacy of Chemotherapy in Multidrug Resistant Cancer Cells, Small, 5, 2673-2677 (2009) was highlighted in TopNews (http://www.topnews.in/usa/node?page=36); Bioscience Technology

- (http://www.biomedicalproducts.com/News/Feeds/2010/02/disease-research-new-developments-in-nanotechnology-tackle-the-2-bi); OneIndia (http://news.oneindia.in/2010/02/26/nanotechnologyapproach-may-fight-problems-linked-
- tochemo.html?utm\_source=feedburner&utm\_medium=feed&utm\_campaign=Feed%3A+oneindia-all-news+%28Oneindia+-+News%29).
- AAPS Physical Pharmacy and Biopharmaceutics (PPB) Graduate Student Award (M. Zhang, Graduate Student of **T. Minko**), 2009.
- First Place Poster Award, The Biennial New Jersey Pharmaceutical Conference (M. Zhang, O. Garbuzenko, L. Rodriguez, **T. Minko**), 2009.
- Second Place Poster Award, The Biennial New Jersey Pharmaceutical Conference (O. Taratula, O. Garbuzenko, Z. Wang, G. Mainelis, **T. Minko**), 2009.
- The New Jersey Cancer Research Award for Scientific Excellence (O. Taratula, O. B. Garbuzenko, R. Savla, H. He, **T. Minko**), 2009.
- The paper M. Saad, O. B. Garbuzenko, **T. Minko**, Co-delivery of siRNA and an anticancer drug for treatment of multidrug resistant cancer, Nanomedicine, 3, 761-776 (2008) was highlighted in LeadDiscovery (http://www.leaddiscovery.co.uk/articles/19025451/ dailyupdate).
- The paper M. Saad, O. B. Garbuzenko, E. Ber, P. Chandna, J. J. Khandare, V. P. Pozharov, **T. Minko**, Receptor targeted polymers, dendrimers, liposomes: Which nanocarrier is the most efficient for tumor-specific treatment and imaging?, J. Control. Release, 130, 107-114 (2008) was highlighted in Cover Story by the Editor-in-Chief of the Journal (K. Park, J. Control. Release, 130, 139, 2008) and the figure from the paper was selected for the cover page of the issue.
- The paper M. L. Patil, M. Zhang, S. Betigeri, O. Taratula, H. He, **T. Minko**, Surface Modified and Internally Cationic Polyamidoamine Dendrimers for Efficient siRNA Delivery, Bioconjugate Chem., 19, 1396-403 (2008) was highlighted in Pharmacy Choice News (http://www.pharmacychoice.com/news/article.cfm?Article\_ID=122774).
- Controlled Release Society Outstanding Pharmaceutical Paper Award, (S. Betigeri, O. B. Garbuzenko, T. Minko), 2008.
- AAPS Biotechnology Graduate Student Award (P. Chandna, Graduate Student of **T. Minko**), 2008.
- AAiPS Research Award for the Contribution to Research in the Pharmaceutical Sciences (P. Chandna, Graduate Student of **T. Minko**), 2008.
- Controlled Release Society Outstanding Student Poster Award (P. Chandna, Graduate Student of T. Minko), 2008.
- Gallo Award for Scientific Excellence, Presented by The Cancer Institute of New Jersey for Outstanding Cancer Research (M. Saad, Graduate Student of **T. Minko**), 2008.
- Gallo Award for Scientific Excellence, Presented by The Cancer Institute of New Jersey for Outstanding Cancer Research (O. Taratula, Graduate Student of **T. Minko** and H. He), 2008.
- Graduate Student Award, 21<sup>st</sup> Annual International Symposium "Frontiers of Nanotechnology & Biotechnology: Integration and Invention" (O. Taratula, Graduate Student of **T. Minko** and H. He), 2008.
- Faculty Academic Service Increment Awards, Rutgers, the State University of New Jersey (2001, 2002, 2004, 2005, 2007, 2010, 2011).
- AAPS Biotechnology Graduate Student Award (S. Betigeri, Graduate Student of **T. Minko**), 2007.

- AAiPS Research Award for the Contribution to Research in the Pharmaceutical Sciences (S. Betigeri, Graduate Student of **T. Minko**), 2007.
- The Outstanding Excellence Awards for the best paper presentations in the 27<sup>th</sup> Anniversary Conference, GRASP 2007 (Oleh Taratula, Graduate Student of **T. Minko** and H. He), 2007.
- The paper J. J. Khandare, **T. Minko**, Polymer-drug conjugates: Progress in polymeric prodrugs, Prog. Polym. Sci., 31, 359-397 (2006) was listed in "Top 25 Hottest Articles of Progress in Polymer Science Journal" by ScienceDirect.
- The paper R. I. Pakunlu, Y. Wang, M. Saad, J. J. Khandare, V. Starovoytov, **T. Minko**, In vitro and in vivo intracellular liposomal delivery of antisense oligonucleotides and anticancer drug, J. Controlled Rel., 114, 153-162 (2006) was listed in "Top 25 Hottest Articles of Journal of Controlled Release" by ScienceDirect.
- The First Place Advanced Drug Delivery Charles A. Stevens Memorial Award at the Philadelphia Pharmaceutical Forum (R. I. Pakunlu, Graduate Student of **T. Minko**), 2006.
- The paper S. S. Dharap, Y. Wang, P. Chandna, J. J. Khandare, B. Qiu, S. Gunaseelan, P. J. Sinko, S. Stein, A. V. Farmanfarmanian and **T. Minko**, Tumor-specific targeting of an anticancer drug delivery system by LHRH peptide, Proc. Natl. Acad. Sci. USA, 102, 12962-12967 (2005) was selected as "Research Highlights" by Nature Reviews Cancer (E. Hutchinson, "Efficient delivery", Nature Reviews Cancer, 5, 10, 2005, P. 759).
- The paper S. S. Dharap, Y. Wang, P. Chandna, J. J. Khandare, B. Qiu, S. Gunaseelan, P. J. Sinko, S. Stein, A. V. Farmanfarmanian and **T. Minko**, Tumor-specific targeting of an anticancer drug delivery system by LHRH peptide, Proc. Natl. Acad. Sci. USA, 102, 12962-12967 (2005) was highlighted by Nature News with article titled: Unerring hormone delivers cancer drug. News@Nature. 22 Aug 2005. http://www.nature.com/news/2005/050822/full/050822-2.html) and by Reuters (http://www.oncolink.org/resources/article.cfm?c=3&s=8&ss=23&id=12229&month=08&year=2005).
- AAiPS Research Award for the Contribution to Research in the Pharmaceutical Sciences (P. Chandna, Graduate Student of **T. Minko**), 2005.
- The First Place Biotechnology Charles A. Stevens Memorial Award at the Philadelphia Pharmaceutical Forum (Y. Wang, Graduate Student of **T. Minko**), 2005.
- The Outstanding Excellence Awards for the best paper presentations in the 25<sup>th</sup> Anniversary Conference, GRASP 2005 (Seema Betigeri and Pooja Chandna, Graduate Students of **T. Minko**), 2005.
- The First Place Biotechnology Charles A. Stevens Memorial Award at the Philadelphia Pharmaceutical Forum (Y. Wang, Graduate Student of **T. Minko**), 2005.
- The paper S. S. Dharap, B. Qiu, G. Williams, P. J. Sinko, S. Stein, **T. Minko**, J. Controlled Rel., 91, 61-73 (2003) was selected as the "Highlights" by Controlled Release Society Newsletter (CRS Newsletter, Vol. 20, No. 3: page 21, 2003).
- The paper S. S. Dharap and **T. Minko**, Pharm. Res., 20, 889-896 (2003) was selected as the "Highlights" by AAPS Newsmagazine, the official publication of the American Association of Pharmaceutical Scientists (AAPS Newsmagazine, Vol.6, No 6: pp.38-39, 2003).
- AAPS Biotechnology Graduate Student Award (S. S. Dharap, Graduate Student of **T. Minko**), 2003.
- Charles A. Stevens Memorial Awards (The First Place) at the Philadelphia Pharmaceutical Forum (S. S. Dharap, Graduate Student of **T. Minko**), 2003.
- Award for an Outstanding Achievement from International Journal of Oncology, Oncology Reports and International Journal of Molecular Medicine, 2002.

- Journal of Applied Physiology of the American Physiological Society chose the paper **T. Minko** at al., J. Appl. Physiol., 93, 1550-1560 (2002) as the "Selected Contribution" and the "Highlighted Topics" of Editorial Commentary.
- AAiPS Research Award for the Contribution to Research in the Pharmaceutical Sciences (S. S. Dharap, Graduate Student of **T. Minko**), 2002.
- Charles A. Stevens Memorial Awards (The Second Place) at the Philadelphia Pharmaceutical Forum (S. S. Dharap, Graduate Student of **T. Minko**), 2002.
- The Jorge Heller Journal of Controlled Release/Controlled Release Society Outstanding Paper Award for 1998 year (**T. Minko**, V. Pozharov, P. Kopeckova, J. Kopecek), 1998.
- Awards of the Biology and Theoretical Medicine Section of the Ukrainian Academy of Sciences, 1984, 1988, 1993.

## **Recent Professional Activities:**

## Service to the Professional/Scientific Organizations

- CRS Board Liaison, Preclinical Sciences & Animal Health Division Committee, 2013-2014.
- Member (Elected), Board of Directors, Controlled Release Society, 2012-2014.
- Program Chair, Nanomedicine and Drug Delivery Symposium (NanoDDS'12), 2012
- Member-At-Large (Elected), Controlled Release Society, 2011-2014.
- Member (Elected), Board of Scientific Advisors, Controlled Release Society, 2010-2012.
- Member, Controlled Release Society Journal Subcommittee, 2010-2012.
- Ex-Officio Member, Website Editorial Committee, Controlled Release Society, 2010-2013.
- Program Chair, Bioactive Materials, 36<sup>th</sup> Annual Meeting of the Controlled Release Society, Copenhagen, Denmark, 2008-2009.
- Member, Controlled Release Society Pharmaceutical Outstanding Paper Award Subcommittee, 2008-2014.
- Abstract Reviewer, Annual Meetings of the American Association of Pharmaceutical Scientists, 2001-Present; Annual Meetings of the Controlled Release of Bioactive Materials, 2003-Present.

### Service to the Scientific Journals

- Executive Editor, "Advanced Drug Delivery Reviews", 2014-Present.
- Member of Editorial Board, "Cancer and Clinical Research", 2014-Present.
- Guest Editor of the Special Issue "Tenth International Nanomedicine and Drug Delivery Symposium", "Journal of Controlled Release" (2013, volume 171).
- Guest Editor of the Theme Issue "Nanotechnology Approaches to Overcoming, Suppressing and Preventing Drug Resistance", "Advanced Drug Delivery Reviews" (2013, volume 65).
- Member, Editorial Board, "Journal of Nanopharmaceutics and Drug Delivery", 2012-Present.
- Member, Editorial Board, "Journal of Controlled Release", 2011-Present.
- Member, Editorial Advisory Board, "Pharmaceutical Nanotechnology", 2011-Present.
- Member, Editorial Advisory Board, "Advanced Drug Delivery Reviews", 2010-Present.

- Member, Editorial Advisory Board, "Molecular Pharmaceutics", 2010-Present.
- Member, Editorial Board, "Theranostics", 2010-Present.
- Member, Editorial Advisory Board, "Drug Delivery and Translational Research", 2010-Present.
- Editor, "Pharmaceutical Research", 2008-Present.
- Guest Editor of the Theme Issue "Intracellular Drug Delivery", "Pharmaceutical Research" (2007, volume 24).
- Member, Editorial Board, "Recent Patents on Drug Delivery and Formulation", 2007-Present.
- Member, Editorial Board, "Critical Reviews in Therapeutic Drug Carriers System", 2005-Present.
- Member, Editorial Advisory Board, "Pharmaceutical Research", 2005-2008.
- Ad Hoc Journal Reviewer, Nature Medicine, Cancer Research, Nature Reviews Drug Discovery, Advanced Drug Delivery Review, ASC Nano, Nanomedicine, Journal of Pharmacology and Experimental Therapy, Journal of Controlled Release, Pharmaceutical Research, Molecular Pharmaceutics, Journal of Pharmaceutical Sciences, International Journal of Pharmaceutics, European Journal of Pharmaceutical Sciences, Journal of Drug Targeting, Nanomedicine, Cancer Letters, Cancer Therapy, Anti-Cancer Drug, Lung Cancer, Cancer Detection and Prevention, Biomacromolecules, American Journal of Drug Delivery, Journal of Biomedical Materials Research, Journal of Bioactive and Compatible Polymers, Biopharmaceutics and Drug Disposition, Neoplasia, Expert opinion on Drug Delivery, Liver International, European Journal of Medicinal Chemistry, AAPS PharmSci, BioTechniques, Medical Science Monitor, 2000-Present.

# Service to the National Institutes of Health, Department of Defense, American Heart Association and International Scientific Review Panels

- Member, NIH Study Section "Nanotechnology" (NANO), 2014 Present.
- Member, Ad Hoc NIH Study Section "Nanotechnology" (NANO), 2009, 2011, 2012, 2013.
- Reviewer, KACST Research Proposal Competition, 2012, 2013.
- Member, NIH/NCI Study Section "Preclinical Pharmacokinetic and Pharmacological Studies of Anticancer and Other Therapeutic Agents" (RFP N01-CM-07014-39), 2010.
- Member, Ad Hoc NIH Special Emphasis Panel Study Section (ZRG1 BST-Z (10) B), 2007.
- Member, Ad Hoc NIH Study Section "Discovery and Development" (DHHS), 2007 2008.
- Member, NIH Study Section "Bioengineering, Technology and Surgical Sciences" (BTSS), 2006 2010.
- Member, Ad Hoc NIH Special Emphasis Panel Study Section "Nanotechnology and Nanosciences" (ZRG1 BCMB-R (50)), 2005.
- Member, Ad Hoc NIH/NCI Special Emphasis Panel Study Section "Cancer Nanotechnology Partnerships" (ZCA1 SRRB-C), 2005.
- Member, Ad Hoc NIH Special Emphasis Panel Study Section "Chemical and Bioanalytical Sciences" (ZRG1 F04A (20)), 2005.
- Member, Ad Hoc NIH Special Emphasis Panel Study Section ZRG1 SBIB-G (03), 2004.
- Member, Ad Hoc NIH Study Section "Bioengineering, Technology and Surgical Sciences" (BTSS), 2003.
- Member, American Heart Association Bioengineering and Biotechnology 1 Peer Review Study Group, 2006
   2007.
- Member, Department of Defense Ovarian Cancer Panel #2 (OC-2), 2006.

- Member, United States Israel Binational Science Foundation (BSF), 2007 2008.
- Member, International Review Panel Charged with Assisting the Portuguese Foundation for Science and Technology in evaluating research proposals in areas of Pharmacology, Pharmaceutical Sciences and Biomaterials (Primary reviewer Drug Delivery; Secondary reviewer Cancer Pharmacology), 2001-2005.

### **Scientific/Professional Societies:**

- American Institute for Medical and Biological Engineering, 2014 Present
- American Chemical Society, 2006 Present
- The International Society for Preventive Oncology, 2002-2006
- American Association of Pharmaceutical Scientists, 1999 -Present
- American Association of Colleges of Pharmacy, 1999 Present
- Controlled Release Society, 1998 Present
- Mountain West Chapter Society of Toxicology, 1998-2000
- American Association for Clinical Chemistry, 1995-1996
- International Society for Adaptive Medicine, 1990-1993
- International Society for Pathophysiology, 1990-1993
- Ukrainian Physiological Society, 1984-1993
- Ukrainian Society for Pharmacology and Toxicology, 1984-1993

## **Service to Rutgers University**

- Member, Promotion and Appointment Committee (PRC), Rutgers, The State University of New Jersey,
   2015-Present
- Member, Office of Research and Economic Development (ORED) Advisory Committee, Rutgers, The State University of New Jersey, 2014-Present
- Member, Faculty Appeals Board, Rutgers, The State University of New Jersey, 2013-Present
- Member, Conflicts of Interest Committee, Rutgers, The State University of New Jersey, 2013-Present
- Chair, The University's Subcommittee on Emergency Preparedness Plan, Rutgers, The State University of New Jersey, 2010 – 2011
- Vice Chair, The University's Animal Care and Facilities Committee, Rutgers, The State University of New Jersey, 2008 – Present
- Member, Graduate School Biological Sciences Area Committee, Rutgers, The State University of New Jersey, 2008 – Present
- Member, The Search Committee for the Dean of the Graduate School of New Brunswick, Rutgers, The State University of New Jersey, 2007 2008
- Member, The Search Committee for the Dean of the Ernest Mario School of Pharmacy, Rutgers, The State University of New Jersey, 2006 – 2007
- Member, The University's Animal Care and Facilities Committee, Rutgers, The State University of New Jersey, 2004 Present

## **Service to Ernest Mario School of Pharmacy**

Chair, Facilities and Resources ACPE Self Study Committee, 2011

– Present

- Vice-Chair, Curriculum, Educational Goal and Outcomes Assessment Committee, Ernest Mario School of Pharmacy, 2008 – Present
- Member, Budget and Policy Committee, 2008 Present
- Member, Space and Physical Resources Committee, 2008 Present
- Member, Organization and Administration Self-Study Focus Group, 2006-2007
- Member, Advisory Committee of Appointment and Promotions, 2005 Present
- Member, Ad Hoc Committee: Self Study Document for External Review, Ernest Mario School of Pharmacy, 2002 – 2003
- Member, Curriculum, Educational Goal and Outcomes Assessment Committee, Ernest Mario School of Pharmacy, 2000 – 2007

## Service to the Department of Pharmaceutics and Graduate Program of Pharmaceutical Science

- Chair, Department of Pharmaceutics, Rutgers, The State University of New Jersey, 2008-Present
- Acting Director, The Graduate Program of Pharmaceutical Science, Rutgers, The State University of New Jersey, 2008
- Member, Admission and Curriculum Committees of the Graduate Program of Pharmaceutical Science, 2005
   Present
- Member, Graduate Students Committees (Independent Research Proposal, Thesis Proposal, Thesis Defense), 2000 Present

## Conference Organizations, Presentations, Lectures and Seminars (2000-Present):

## **Conference Organizer, Section Chair/Moderator**

- 1. Chair, Session "Nanomedicine", 16<sup>th</sup> International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, UT, February 5, 2013.
- 2. Chair, Organizing Committee, 10<sup>th</sup> International Nanomedicine and Drug Delivery Symposium (NanoDDS'12), Atlantic City, NJ, December 5-7, 2012.
- 3. Member, Organizing Committee and Session Chair, 9<sup>th</sup> International Nanomedicine and Drug Delivery Symposium (NanoDDS'11), Salt Lake City, UT, October 15-16, 2011.
- 4. Chair, Session "Oncology and Tumor targeting", 38<sup>th</sup> Annual Meeting of the Controlled Release Society, National Harbor, MD, August 2, 2011.
- 5. Program Chair, the 36th Annual Meeting of the Controlled Release Society, Copenhagen, Denmark (2008-2009).
- 6. Chair, Session "Inhaled Medicine", the 36th Annual Meeting of the Controlled Release Society, Copenhagen, Denmark, July 22, 2009.
- 7. Section Chair, 2008 NSTI Nanotech 2008 11th Annual Meeting, NCI/NSTI Special Symposium on Nanotechnology for Cancer Prevention, Diagnosis and Treatment, Boston, MA, June 4, 2008.
- 8. Chair and Moderator, Section "Nanotechnology Approaches for Bioimaging", the Fourth International Nanomedicine and Drug Delivery Symposium, Omaha, Nebraska, October 9, 2006.
- 9. Chair, Section "Drug Delivery Systems", the 7th International Biorelated Polymers Symposium at the 232nd American Chemical Society Meeting, San Francisco, California, September 12, 2006.

- 10. Chair, Section "Biomimetic Carriers", the 33<sup>rd</sup> Annual Meeting of the Controlled Release Society, Vienna, Austria, July 23, 2006.
- 11. Conference Organizer and Chair, the Biennial New Jersey Pharmaceutical Conference of 2005 "Contribution of Women in the Pharmaceutical Sciences", East Brunswick, NJ, October 6, 2005.
- 12. Chair and Moderator, Section "Targeted Delivery of Anticancer Agents", the Third International Nanomedicine and Drug Delivery Symposium, Baltimore, Maryland, September 27, 2005.
- 13. Chair and Moderator, Section "Receptor Mediated Drug Targeting", 31<sup>st</sup> International Symposium on Controlled Release of Bioactive Materials, Honolulu. Hawaii, June 12, 2004.
- 14. Chair, Section "Pharmacology and Biochemistry", 8<sup>th</sup> World Congress on Advances in Oncology and 6<sup>th</sup> International Symposium on Molecular Medicine, Hersonissos, Crete, Greece, October 16, 2003.
- 15. Chair, Section "Pharmacology and Biochemistry", 7<sup>th</sup> World Congress on Advances in Oncology and 5<sup>th</sup> International Symposium on Molecular Medicine, Hersonissos, Crete, Greece, October 10, 2002.
- 16. Chair and Member of the Student Poster Session Committees for the following conferences:
- The Ninth International Nanomedicine and Drug Delivery Symposium, Salt Lake City, UT, October 15-16, 2011.
  - Toward the Development of Drug Delivery Systems, 2<sup>nd</sup> Annual Meeting of Italian Chapter of AAPS, Perugia, Italy, March 7, 2008.
  - The Fifth International Nanomedicine and Drug Delivery Symposium, Boston, MA, November 2, 2007.
  - GRASP 2007, 27th Annual Meeting, New Brunswick, NJ, June 1-3, 2007.
  - Targeted Nanocarriers and Therapeutics, Institute for Translational Medicine and Therapeutics, The University of Pennsylvania School of Medicine, Philadelphia, PA, November 16, 2006.

# **Keynote/Plenary/Invited Lectures and Seminars**

- 1. "Nanotechnology Approaches for Personalized and Targeted Treatment of Cancer", AAPS Workshop on Nanotechnology in Personalized Medicine", October 25, 2015, Orlando, FL.
- 2. "Lipid-Based Microencapsulation for Drug and Gene Delivery in Lung Diseases", 20th International Symposium on Microencapsulation (IMS2015), October 3-5, 2015, Boston, MA.
- 3. "Advances in Nanomedicine Application for Therapy and Imaging", Evonik Meets Science, North America 2015 Innovations in Drug Delivery Technologies, September 14, 2015, Jersey City, NJ.
- 4. "Advances in Nanomedicine Application for Therapy and Imaging", First International Nanomedicine Symposium and Workshop: Impact of Nanobiotechnology Applications on the Future of Medicine and Personalized Medicine, August 4, 2015, Albany, NY.
- 5. "Nanotechnology Approaches for Personalized and Targeted Treatment", First International Nanomedicine Symposium and Workshop: Impact of Nanobiotechnology Applications on the Future of Medicine and Personalized Medicine, August 4, 2015, Albany, NY.
- 6. "Nanotechnology Approaches for Personalized Treatment of Cancer", 42<sup>nd</sup> Controlled Release Society Annual Meeting, July 26-29, 2015, Edinburgh, Scotland.
- 7. "The Best Animal Model for Drug Delivery Studies", 42<sup>nd</sup> Controlled Release Society Annual Meeting, July 26-29, 2015, Edinburgh, Scotland.
- 8. "Nanotechnology Approach for Inhalation Treatment of Lung Cancer", Cancer Drug Discovery and Enabling Technologies Symposium, RCIPR, April 10, 2015, Piscataway, NJ.

- 9. "Nanotechnology Approaches for Personalized Treatment of Cancer", 3rd Nanomedicine Conference, March 13-14, 2015, Los Angeles, CA.
- 10. "Tumor-Targeted Nanotherapeutics", University of Pittsburgh, March 3, 2015, Pittsburgh, PA.
- 11. "Tumor-Targeted Nanotherapeutics", Capital Region Cancer Research New Frontiers Symposium 2014: New Strategies and Technologies in Cancer Research, November 14, 2014, Albany, NY.
- 12. "Nanotechnology Approaches for Personalized Treatment of Cancer", Targeted therapeutics and Translational Medicine 2014 Symposium, November 12, 2014, Philadelphia, PA.
- 13. "Drug delivery systems for lungs", NHLBI Workshop: Precision Therapeutics Delivery for Lung Diseases: State of the Art Technologies and Lung Biology, September 24, 2014, Bethesda, MD.
- 14. "Tumor-Targeted Nanotherapeutics", TechConnect World 2014 Congress, Cancer Nanotechnology II, June 16, 2014, Washington, D.C.
- 15. "Tumor-Targeted Nanotherapeutics", School of Pharmacy, University of Connecticut, April 29, 2014, Storrs, CT.
- 16. "Nanotechnology-Based Method for Treatment of Primary Ovarian Cancer and Prevention of Metastases", Molecular Response, April 4, 2014, San Diego, CA.
- 17. "Tumor-Targeted Nanotherapeutics", 2013 Eastern Pharmaceutical Technology Meeting (EPTM), September 20, 2013, Basking Ridge, NJ.
- 18. "Targeted Drug Delivery of Chemotherapeutics Utilizing Nanoparticle and Liposomal Formulations", 2013 Medicinal Chemistry Gordon Research Conference, August 6, 2013, New London, NH.
- 19. "Nanotechnology Strategies to Overcome Drug Resistance", 2nd Nanomedicine for Imaging and Treatment Conference, Cedars-Sinai Medical Center, March 16, 2013, Los Angeles, CA.
- 20. "Nanotechnology Strategies to Overcome Limitations in Treatment of Challenging Diseases", Biosciences Working Group (BSWG), The MITRE Corporation, January 23, 2013, McLean, VA.
- 21. "Nanotechnology-Based Targeted Cancer Treatment", 2012 AAPS Annual Meeting, October 17, 2012, Chicago, IL.
- 22. "Combined Targeted Chemo and Gene Therapy for Tumor Suppression and Prevention of Metastasis", Oligonucleotide Delivery: Biology, Engineering and Development, October 8, 2012, Hernstein, Austria.
- 23. "Boosting the EPR Effect by Targeting of Nanocarriers to Tumor-Specific Receptors", Workshop "Critical Appraisal of EPR Effect and Intratumoral Distribution of Nanomedicine", 38th Annual Meeting of the Controlled Release Society, July 14, 2012, Quebec City, Canada.
- 24. "Non-Viral Systemic Delivery of siRNA or Antisense Oligonucleotides Targeted to Jun N-Terminal Kinase 1 Prevents Cellular Hypoxic Damage", 38th Annual Meeting of the Controlled Release Society, July 16, 2012, Quebec City, Canada.
- 25. "Nanotechnology Strategies to Overcome Multidrug Resistance", School of Pharmacy, Oregon State University, April 19, 2012, Corvallis, OR.
- 26. "Cancer Stem Cells Specific Therapy: Targeted Nanomedicine for Simultaneous Suppression of CD44 Protein and Cell Death Induction", 9<sup>th</sup> International Conference and Workshop on Biological Barriers, March 6, 2012, Saarbrucken, Germany.
- 27. "Molecular Targeting of Drug Delivery Systems to Cancer", Nanomedicine Research Center, Cedars-Sinai Medical Center, November 16, 2011, Los Angeles, CA.
- 28. "Nanotechnology Strategies to Overcome Limitations in Cancer Treatment", Department of Pharmaceutical Sciences at the University at Buffalo, The State University of New York, October 6, 2011, Buffalo, NY.

- 29. "Combination of Tumor-Targeted Chemo- and Gene Therapy for Treatment of Primary Ovarian Cancer and Prevention of Metastases", Ovarian Cancer Symposium: "One Force to Make a Difference", June 18, 2011, Princeton, NJ.
- 30. "Multifunctional and Multicomponent Drug Delivery Systems for Cancer Treatment and Imaging", The 2011 Annual Retreat on Cancer Research in New Jersey, May 26, 20011, Piscataway, NJ.
- 31. "Nanotechnology Strategies to Overcome Limitations in Drug Delivery: Opportunities and Challenges", The Eighth International Nanomedicine and Drug Delivery Symposium, October 3, 2010, Omaha, NE.
- 32. "Molecular Targeting of Drug Delivery Systems to Cancer", Gordon Research Conferences: Drug Carriers in Medicine and Biology, August 17, 2010, Waterville Valley, NH.
- 33. "Nanotechnology Strategies to Overcome Limitations in Cancer Treatment", Particles 2010: Medical/Biochemical Diagnostic, Pharmaceutical, and Drug Delivery Applications of Particle Technology, May 23, 2010, Lake Buena Vista, FL.
- 34. "Nanotechnology Strategies to Overcome Limitations in Cancer Chemotherapy", Department of Pharmaceutical Sciences, Wayne State University, April 28, 2010, Detroit, MI.
- 35. "Nanotechnology Strategies to Overcome Limitations in Drug Delivery: Opportunities and Challenges", New York Society of Cosmetic Chemists (NYSCC) Spring Seminar, April 21, 2010, West Orange NJ.
- 36. "Nanotechnology Strategies to Overcome Limitations in Drug Delivery: Opportunities and Challenges", Clinical Applications of Quantum Dot and Nanoparticle Technology, University of Illinois at Chicago Center for Clinical and Translational Science (CCTS), April 13, 2010, Chicago, IL.
- 37. "Mechanisms of Cellular Drug Resistance and Strategies to Overcome It", Symposium on Biomedical Polymers for Drug Delivery, March 27, 2010, Salt Lake City, UT.
- 38. "Nanotechnology Strategies to Overcome Limitations in Drug Delivery: Opportunities and Challenges", University of Wisconsin, March 17, 2010, Madison, WI.
- 39. "Nanotechnology Strategies to Overcome Limitations in Cancer Chemotherapy", F. Hoffmann-La Roche Ltd, January 29, 2010, Nutley, NJ.
- 40. "New horizons in treatment of lung cancer: Combinatorial liposomal inhalation delivery of drugs and suppressors of cellular resistance", Liposome advances: Recent trends and progress, December 13, 2009, London, UK.
- 41. "Targeted multifunctional nanocarriers for tumor treatment and imaging", Annual Meeting of the American Association of Pharmaceutical Scientists, November 11, 2009, Los Angeles, CA.
- 42. "Inhalatory co-delivery of anticancer drugs and antisense oligonucleotides/siRNA for lung cancer treatment", 35th Annual Meeting of the Controlled Release Society, July 22, 2009, Copenhagen, Denmark.
- 43. "Nanotechnology Strategies to Overcome Limitations in Drug Delivery: Opportunities and Challenges", 41<sup>st</sup> Annual Pharmaceutics Graduate Student Research Meeting "Globalization of the Pharmaceutical Industry", June 26, 2009, Purdue University, West Lafayette, IN.
- 44. "Nanotechnology Strategies to Overcome Limitations in Drug Delivery: Opportunities and Challenges", AAPS Workshop on Evolving Science and Technology in Physical Pharmacy and Biopharmaceutics, May 15, 2009, Baltimore, MD.
- 45. "Receptor Targeted Nanocarriers for Tumor-Specific Treatment and Imaging", 14th International Symposium on Recent Advances in Drug Delivery Systems, February 18, 2009, Salt Lake City, UT.

- 46. "Multifunctional Nanotherapeutics for Cancer Treatment", American Association for Cancer Research American Chemical Society Joint Conference on: Chemistry in Cancer Research: A Vital Partnership in Drug Discovery and Development, February 10, 2009, New Orleans, LA.
- 47. "Receptor Targeted Nanocarriers for Tumor-Specific Treatment and Imaging", The Provost Interdisciplinary Seminar Series on Targeted Therapeutics and Drug Delivery Systems, The University of Pennsylvania School of Medicine, Philadelphia, PA, January 14, 2009.
- 48. "Receptor-targeted nanocarriers for tumor-specific treatment and imaging", Birck Nanotechnology Center, Purdue University, West Lafayette, IN, December 11, 2008.
- 49. "Efficient Co-Delivery of siRNA/Antisense Oligonucleotides and Drug for Lung Cancer Treatment", 36<sup>th</sup> Annual Scientific Session of the New Jersey Thoracic Society, New Brunswick, NJ, June 6, 2008.
- 50. "Nanocarriers for Tumor-Targeted Drug Delivery", 2008 NSTI Nanotech 2008 11th Annual Meeting, NCI/NSTI Special Symposium on Nanotechnology for Cancer Prevention, Diagnosis and Treatment, Boston, MA, June 4, 2008.
- 51. "Targeted Multifunctional Nanocarriers for Tumor Treatment and Imaging", Toward the Development of Drug Delivery Systems, 2<sup>nd</sup> Annual Meeting of Italian Chapter of AAPS, Perugia, Italy, March 7, 2008.
- 52. "Targeted Multifunctional Nanocarriers for Intracellular Drug Delivery", University of Ferrara, Italy, March 6, 2008.
- 53. "Targeted Multifunctional Nanocarriers for Tumor Treatment and Imaging", School of Pharmacy, University of Rhode Island, Kingston, RI, May 15, 2008.
- 54. "Tumor Targeted Anticancer Prodrugs", Annual Meeting of the American Association of Pharmaceutical Scientists, San Diego, CA, November 15, 2007.
- 55. "Targeted Multicomponent Nanocarriers for Cancer Treatment and Diagnostics", The Fifth International Nanomedicine and Drug Delivery Symposium, Boston, MA, November 2, 2007.
- 56. "Multifunctional Drug Delivery System for Inhalatory Treatment of Lung Cancer", The Biennial New Jersey Pharmaceutical Conference of 2007, New Brunswick, NJ, October 5, 2007.
- 57. "Targeted Multifunctional Nanocarriers for Intracellular Drug Delivery", Department of Pharmaceutics at the University of Minnesota, Minneapolis, MN, September 20, 2007.
- 58. "Targeted multicomponent nanocarriers in cancer treatment", the 6th Annual Meeting of the Israeli Chapter of the Controlled Release Society on September 5, 2007, Cesaria, Israel.
- 59. "Targeted Multifunctional Drug Delivery Systems for Cancer Treatment and Imaging" Chemistry and Chemical Biology Department at Stevens Institute of Technology, Hoboken, NJ., September 12, 2007.
- 60. "Tumor-Specific Targeting of Drug Delivery Systems for Cancer Therapy and Imaging", 34th Annual Meeting of the Controlled Release Society, Long Beach, CA, July 11, 2007.
- 61. "Complex Liposomal Drug Delivery System for Inhalatory Treatment of Lung Cancer", 35th Annual Scientific Session of the New Jersey Thoracic Society, New Brunswick, NJ, June 1, 2007.
- 62. "Targeted Multifunctional Nanocarriers for Intracellular Drug Delivery", Department of Chemistry, Newark, Rutgers, The State University of New Jersey, Newark, NJ, March 30, 2007.
- 63. "Receptor Targeting of Polymer Therapeutics and Imaging Agents to Tumor", International Symposium on Polymer Therapeutics ISPT-07, Berlin, Germany, February 20, 2007.
- 64. "Tumor-Specific Targeting of Drug Delivery Systems", Novartis Pharmaceuticals, East Hanover, NJ, November 17, 2006.

- 65. "Targeted Nanocarriers for Intracellular Drug Delivery", Targeted Nanocarriers and Therapeutics, Institute for Translational Medicine and Therapeutics, The University of Pennsylvania School of Medicine, Philadelphia, PA, November 16, 2006.
- 66. "Tumor Targeting Liposomal Complex for Short Interfering RNA Delivery", Georgetown University Medical Center, Washington DC, October 24, 2006.
- 67. "Targeted Polymeric Prodrug with Multivalent Components for Cancer Therapy", the 7th International Biorelated Polymers Symposium at the 232nd American Chemical Society Meeting, San Francisco, CA, September 12, 2006.
- 68. "Molecular targeting of drug delivery system to lung cancer", 34<sup>th</sup> Annual Scientific Session of New Jersey Thoracic Society, New Brunswick, NJ, June 2, 2006.
- 69. "Targeted Proapoptotic Drug Delivery System for Chemotherapy of Ovarian Cancer", The Cancer Institute of New Jersey, New Brunswick, NJ, May 5, 2006.
- 70. "Extracellular and intracellular molecular targeting of drug delivery system to cancer", College of Pharmacy, University of Nebraska Medical Center, Omaha, NE, March 31, 2006.
- 71. "Targeted anticancer polymeric prodrugs", Abbott Laboratories, Abbott Park, IL, March 23, 2006.
- 72. "Complex drug delivery composition for treating cancer", Department of Pharmaceutics and Pharmaceutical Chemistry, University of Utah, Salt Lake City, UT, February 27, 2006.
- 73. "Advances in targeted drug delivery for cancer treatment", Bristol-Myers Squibb Co., New Brunswick, NJ, February 3, 2006.
- 74. "Targeted drug delivery systems for cancer therapy", Department of Biopharmaceutical Sciences, University of Illinois at Chicago, Chicago IL, January 11, 2006.
- 75. "Advanced targeted drug delivery systems for cancer therapy", International Conference on Advances in Pharmaceutical Research and Technology, Mumbai, India, November 25-29, 2005.
- 76. "Novel approaches in anticancer drug delivery", The Biennial New Jersey Pharmaceutical Conference of 2005 "Contribution of Women in the Pharmaceutical Sciences", East Brunswick, NJ, October 6, 2005.
- 77. "Delivery system for remediation of cellular hypoxic damage", Third International Nanomedicine and Drug Delivery Symposium, Baltimore, MD, September 26-27, 2005.
- 78. "Molecular targeting of drug delivery systems to cancer", College of Pharmacy, Howard University, Washington, DC, November 4, 2004.
- 79. "Targeted delivery of anticancer drugs and peptides by polyethylene glycol conjugates", 7th Symposium on Biomaterials Science, New Brunswick, NJ, October 21-22, 2004.
- 80. "Extracellular and intracellular molecular targeting of drug delivery system to cancer cells", World Conference on Dosing of Antiinfectivnes Dosing the Magic Bullets, Nurnberg, Germany, September 9-11, 2004.
- 81. "A novel multicomponent delivery system to enhance the efficacy of lung cancer therapy", 32<sup>nd</sup> Annual Scientific Section of the New Jersey Thoracic Society, New Brunswick, NJ, June 4, 2004.
- 82. "Targeted proapoptotic anticancer drug delivery system", College of Pharmacy, University of Maryland, Baltimore, MD, March 3, 2004.
- 83. "Molecular targeting of drug delivery systems to cancer cells by peptides and antisense oligonucleotides", College of Pharmacy, University of Kentucky, Lexington, KY, February 27, 2004.
- 84. "Molecular targeting of cellular resistance in cancer", 8th World Congress on Advances in Oncology and 6th International Symposium on Molecular Medicine, Crete, Greece, October 16, 2003.

- 85. "Multicomponent drug delivery system for enhancing the efficacy of cancer chemotherapy", Meeting of the New Jersey Center for Biomaterials, New Brunswick, NJ, September 17, 2003.
- 86. "Molecular targeting of drug delivery systems to cancer cells by peptides and antisense oligonucleotides", Department of Biopharmaceutical Sciences, University of Illinois at Chicago, Chicago IL, April 2, 2003.
- 87. "Genetic adaptation to life at high altitude: Adaptation to chronic hypoxia, relevance to disease at sea level", University of Lima, Lima, Peru, March 14, 2003.
- 88. "Advanced targeted drug delivery systems for cancer therapy", Myriad Genetics, Inc., Salt Lake City, UT, March 4, 2003.
- 89. "Molecular targeting of drug delivery systems to cancer cells by peptides and antisense oligonucleotides", EOHSI, Piscataway, NJ, February 6, 2003.
- 90. "Targeted proapoptotic drug delivery systems in cancer chemotherapy", 7th World Congress on Advances in Oncology and 5th International Symposium on Molecular Medicine, Hersonissos, Crete, Greece, October 11, 2002.
- 91. "Targeted proapoptotic drug delivery systems in cancer chemotherapy", Cancer Institute of New Jersey (Breast Cancer Research Program), New Brunswick, NJ, May 2002.
- 92. "Advanced drug delivery systems in cancer chemotherapy", The Screening Technologies Branch of the Developmental Therapeutics Program in Drug Discovery and Development, National Cancer Institute, Frederick, MD, March 2002.
- 93. "Enhancing the efficacy of chemotherapeutic drugs by the suppression of antiapoptotic cellular defense", 6<sup>th</sup> International Symposium on Predictive Oncology and Intervention Strategies, Pasteur Institute, Paris, France, February 2002.
- 94. "Novel drug delivery systems for cancer therapy", Salvona, Dayton, NJ, January 2002.
- 95. "Enhancing the efficacy of chemotherapeutic drugs by the suppression of antiapoptotic cellular defense", GPCC Retreat, The Center for Advanced Biotechnology and Medicine, UMDNJ, Piscataway, NJ, December 2001.
- 96. "Advanced drug delivery systems in cancer chemotherapy", VectraMed, Princeton, NJ, December 2001.
- 97. "Enhancing the efficacy of anticancer drugs using multicomponent advanced drug delivery system", The Cancer Institute of New Jersey, New Brunswick, NJ, December 2001.
- 98. "Advanced drug delivery systems in cancer chemotherapy", Pharmaceutics Conference 2001, East Brunswick, NJ, November 2001.
- 99. A polymer drug delivery system for cancer therapy, New Jersey Center for Biomaterials, Piscataway, NJ, June 1, 2001.
- 100. Antitumor activity and cell death signaling pathway of free and polymer-bound doxorubicin. The PH 890, Pharmacy Seminar (Pharmaceutics, Spring 2001), Philadelphia College of Pharmacy, University of the Science, Philadelphia, PA, April 27, 2001.
- 101. Mechanisms of anticancer action of HPMA copolymer-bound doxorubicin, ENZON, Inc., Piscataway, NJ, November 16, 2000.
- 102. Mechanism of anticancer action of HPMA copolymer-bound doxorubicin, 40<sup>th</sup> Microsymposium "Polymers in Medicine", Czech Republic, July 2000, Special Lecture #4.
- 103. "Cell death signaling pathways and antitumor activity polymer-bound drugs", Department of Pharmacology and Toxicology, School of Pharmacy, University of Utah, Salt Lake City, UT, November 1999.

- 104. "Adaptation to moderate stress increases the resistance to severe hypoxia", International Symposium on High-Altitude Medicine, Matsumoto, Japan, September 1992.
- 105. "The criterion for the selection of hypoxic impacts for interval hypoxic training", International Symposium on Interval Hypoxic Training: Efficiency and Mechanisms of Action, Kiev, Ukraine, September 1992.
- 106. "Oxygen supply-consumption ratio as the criterion of tissue hypoxia", Hypoxia and Ischemia: Basic and Applied Aspects, Berlin, Germany, September 1991.
- 107. "Primary and secondary disturbances of acid-base homeostasis", Acid-base and Thermal Homeostasis, Syktyvkar, Russia, February 1991.
- 108. "Influence of adaptation to high altitude hypoxia on the resistance of an organism to oxygen deficiency and stress", Functional Reserves and Adaptation, Kiev, Ukraine, September 1990.
- 109. "Peculiarities of organism oxygen supply under bronchial asthma in mountains", Usage of Mountain Climate to Treatment and Prophylaxis, Nalchik, Russia, April 1988.
- 110. "The conformity between oxygen mass transfer and its consumption during hypoxia of different genesis", Regulation of Respiration and Gas Mass Transfer in the Organism, Leningrad, Russia, April 1985.

# **Oral (Podium) Presentations**

- 1. "Straight to the Target: A Novel Polymeric Prodrug with Multivalent Components for Cancer Therapy", 33<sup>rd</sup> International Symposium on Controlled Release of Bioactive Materials, Vienna, Austria, July 22-26, 2006.
- 2. "Hypoxia Inducible Factor Targeted Anticancer Prodrug", 32<sup>nd</sup> International Symposium on Controlled Release of Bioactive Materials, Miami, FL, June 18-22, 2005.
- 3. "Targeted proapoptotic anticancer drug delivery system", 31<sup>st</sup> International Symposium on Controlled Release of Bioactive Materials, Honolulu, HI, June 15, 2004.
- 4. "Novel Targeted Drug Delivery Systems Combining Anticancer Drug, Targeting Moiety and Suppressors of Multidrug Resistance and Antiapoptotic Cellular Defense", CRS Winter Symposia & 11<sup>th</sup> International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, UT, March 3-6, 2003.
- 5. "Molecular targeting of drug delivery systems for ovarian carcinoma therapy", International Symposium on Tumor Targeted Delivery Systems (CRS & NIH), Bethesda, MD, September 24, 2002.
- 6. "Simultaneous modulation of multidrug resistance and antiapoptotic cellular defense with liposomes containing doxorubicin and antisense oligonucleotides targeting MDR1 and BCL-2 mRNA", 29<sup>th</sup> Annual Meeting of the Controlled Release Society, Seoul, Korea, July 25, 2002.
- 7. "Delivery of synthetic BCL-2 homology 3 domain (BH3) peptide by fusion with the Antennapedia internalization sequence in combination with an antiapoptotic drug concurrently enhances apoptosis and inhibits antiapoptotic defenses in human ovarian carcinoma", Gordon Research Conference: Drug Carriers in Medicine and Biology, Ventura, CA, February 2002.
- 8. "Role of caspases in cellular signal transduction pathways of apoptosis induced by free and HPMA copolymer-bound doxorubicin", The 27<sup>th</sup> International Symposium on Controlled Release of Bioactive Materials, Paris, France, July 2000.
- 9. "Cell death signaling pathways, toxicity and antitumor activity of free and polymer-bound doxorubicin", Molecular Genetics in Toxicology, 17<sup>th</sup> Annual Meeting of Mountain West Chapter of Society of Toxicology, Breckenridge, CO, September 1999.

- 10. "EPR effect, multidrug resistance and the efficacy of HPMA copolymer-bound adriamycin in solid tumors with high vascularization", The 26th International Symposium on Controlled Release of Bioactive Materials, Boston, MA, June 1999.
- 11. "Peculiarities of apoptosis induction and cell metabolism in human ovarian carcinoma cell lines exposed to free and HPMA copolymer bound adriamycin", The 25th International Symposium on Controlled Release of Bioactive Materials, Las Vegas, NV, June 1998.
- 12. "Mechanisms of the increase in the work load after preliminary adaptation to intermittent hypoxia and training", III World Congress of ISAM, Tokyo, Japan, May 1993.
- 13. "Towards a new way to elevate the resistance against damaging environmental impacts", 1<sup>st</sup> American Ukrainian Workshop "Health Care: Clinical and Basic Research", Kiev, Ukraine, June 1993.
- 14. "Hypoxic acid-base changes, lipid peroxidation and oxygen supply-consumption ratio", 7<sup>th</sup> International Hypoxia Symposium, Lake Louise, Canada, February 1991.
- 15. "Adaptation to high altitude limits tissue hypoxia and lipid peroxidation under severe acute environmental hypoxia", International Congress of Mountain Medicine, Crans-Montana, Switzerland, April 1991.
- 16. "Interrelation of lipid peroxidation and tissue hypoxia under hypoxic states of different genesis", Constituent Congress of International Society for Pathophysiology, Moscow, Russia, May 1991.
- 17. "Role of primary disturbances of blood buffer capacity in the compensation of metabolic acidosis", Actual Problems of Pathology of Respiration, Kujbyshev, Russia, November 1989.
- 18. "Factors which determine resistance of blood active reaction under hypoxia", Reactivity and Resistance: Fundamental and Applied Aspects, Kiev, Ukraine, May 1987.
- 19. "Respiration, circulation, blood acid-base balance and oxygen regimen of organism in women-arid zone lenders with iron deficit anemia under the influence of mountain climate", Human Adaptation in Different Climatogeographic and Industrial Environment, Novosibirsk, Russia, June 1981.
- 20. "Peculiarities of blood buffering properties and acid base status in girls with secondary anemia", Annual Meeting of Physiological Society: Special and Clinical Physiology of Hypoxic States, Kiev, Ukraine, November 1979.

# Oral (Podium) Presentations of the Graduate Students, Postdoctoral Fellows and Researchers from Minko's Lab since Joining Rutgers in 2000

- "Inhalation treatment of lung cancer: The influence of composition, size and shape of nanocarriers on their lung accumulation and retention", 2015 Annual Retreat in Cancer Research, May 20, 2015, Piscataway, NJ (O. Garbuzenko, G. Mainelis, O.Taratula, T, Minko).
- 2. "Dendrimer-based multifunctional nanomedicine platforms for targeted delivery of siRNA", 10<sup>th</sup> International Nanomedicine and Drug Delivery (NanoDDS'12) Symposium, December 6-7, 2012, Atlantic City, NJ (O. Taratula, O. B. Garbizenko, P. Kirkpatrick, I. Pandya, R. Savla, V. P. Pozharov, H. He, T. Minko).
- 3. "Nanostructured lipid carriers as multifunctional nanomedicine platform for pulmonary codelivery of anticancer drugs and siRNA", 38th Annual Meeting of the Controlled Release Society, July 31-August 3, 2011, National Harbor, MD (O. Taratula, M. Shah, O. Garbuzenko, T. Minko).
- 4. "The influence of composition, size, and shape of nanocarriers on their accumulation and retention in lungs after pulmonary (or inhalatorial) delivery", The 2011 Annual Retreat on Cancer Research in New Jersey, May 26, 2011, Piscataway, NJ (O. Garbuzenko, O. Taratula, T. Minko).

- 5. "Receptor-targeted surface-engineered PPI dendrimer for efficient intracellular and intratumoral siRNA delivery", 37th Annual Meeting of the Controlled Release Society, July 10-14, 2010, Portland, OR (O. Taratula, O. B. Garbuzenko, P. Kirkpatrick, I. Pandya, R. Savla, V. P. Pozharov, H. He, T. Minko).
- 6. "Combinatorial inhalatory co-delivery of drug and antisense oligonucleotides for treatment of lung cancer", 37th Annual Meeting of the Controlled Release Society, July 10-14, 2010, Portland, OR (O. Garbuzenko, M. Saad, K. Reuhl, G. Mainalis, T. Minko).
- 7. "Combinatorial local inhalatory treatment of lung cancer", Innovations in Drug Delivery Technologies, The Biennial New Jersey Pharmaceutical Conference of 2009, November 20, 2009, Piscataway, NJ (O. Garbuzenko, M. Saad, V. P. Pozharov, K. R. Reuhl, G. Mainelis, T. Minko).
- 8. "Dendrimers as Potential siRNA Delivery Vehicles for Efficient Cancer Therapy", Innovations in Drug Delivery Technologies, The Biennial New Jersey Pharmaceutical Conference of 2009, November 20, 2009, Piscataway, NJ (O. Taratula, O. Garbuzenko, T. Minko).
- 9. "Receptor targeted polymers, dendrimers, liposomes: Which nanocarrier is the most effective for tumor specific treatment and imaging?" in 35th Annual Meeting of the Controlled Release Society, July 12-16, 2008, New York, NY (M. Saad, O. B. Garbuzenko, E. Ber, P. Chandna, J. J. Khandare, V. P. Pozharov, T. Minko).
- 10. "A novel targeted proapoptotic drug delivery system for efficient anticancer therapy" in 35th Annual Meeting of the Controlled Release Society, July 12-16, 2008, New York, NY (P. Chandna, M. Saad, Y. Wang, E. Ber, J. Khandare, A. A. Vetcher, V. A. Soldatenkov, T. Minko).
- 11. "JNK1 as a molecular target to limit cellular damage under hypoxia" in 35th Annual Meeting of the Controlled Release Society, July 12-16, 2008, New York, NY (S. Betigeri, O. B. Garbuzenko, T. Minko).
- 12. "Noninvasive in vivo bioluminescent and fluorescent optical imaging in cancer research" in The Annual Retreat on Cancer Research in New Jersey, May 28, 2008, Piscataway, NJ (M. Saad, O. B. Garbuzenko, J. J. Khandare, Y.Wang, A. A. Vetcher, V. A. Soldatenkov, T. Minko).
- 13. "Toward in vivo targeted delivery of siRNA for efficient cancer therapy" at The Annual Retreat on Cancer Research in New Jersey, , May 28, 2008, Piscataway, NJ (O. Taratula, R.Salva, I. Pandya, H. Geng, A. Wang, T. Minko, H. He).
- 14. "Targeted nanocarier-based delivery of near-infrared cyanine dye enhances tumor imaging" in the Fourth Nanomedicine and Drug Delivery Symposium, October 10, 2006, Omaha, NE (M. Saad, J. J. Khandare, Y. Wang, T. Minko).
- 15. "JNK1 as a molecular target to decrease cellular mortality under hypoxia", 25th Annual Meeting of the Graduate Research Association of Students in Pharmacy (GRASP), June 10-12, 2005, New York, NY (S. Betigeri, R. I. Pakunlu, T. Minko).
- 16. "Enhancement of the efficacy of chemotherapy for lung cancer by simultaneous suppression of multidrug resistance and antiapoptotic cellular defense: Novel multicomponent delivery system", 24th Annual Meeting of the Graduate Research Association of Students in Pharmacy (GRASP), June 4-6, 2004, Atlanta, GA (R. I. Pakunlu, Y. Wang, T. Minko).
- 17. "Potential use of the combined liposomal hypoxia inducible factor 1 alpha antisense oligonucleotides and doxorubicin as a novel anticancer therapy", 24th Annual Meeting of the Graduate Research Association of Students in Pharmacy (GRASP), June 4-6, 2004, Atlanta, GA (Y. Wang, R. I. Pakunlu, T. Minko).
- 18. "Molecular targeting of drug delivery systems to cancer cells by BH3 and LHRH peptides", 23rd Annual Meeting of the Graduate Research Association of Students in Pharmacy (GRASP), May 30 June 1, 2003, Richmond, VA (S. S. Dharap, B. Qiu, S. Stein, P. J. Sinko, T. Minko).

Poster Presentations of the Graduate Students, Postdoctoral Fellows and Researchers from Minko's Lab since Joining Rutgers in 2000 – Total: 124.

# **Teaching Activities (since Joining Rutgers, 2000 – Present):**

# Undergraduate/Professional (Pharm. D.) and Graduate (Ph.D., M.S.)

		- COURSE IN	FORM	MATION	-				- COURSE	E EVALU	ATION -	
									Teachi Effective (Max =	ness	Course Q (Max :	
S/ Yr	Course Title	Number	Cr	MOI	Aud	Resp	Enrl	Evaluation Responses	Instructor	Dept Mean	Instructor	Dept Mean
FA15	Graduate Seminar in Pharmaceutical Sciences	16:720:601	1	CC Sem	Grad	Total	6	Evaluation is not conducted for the seminar				
FA15	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	8	Evaluation is not conducted for the research course				
SU15	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	8	Evalu	ation is not con	ducted for	the research cou	rse
SP15	Drug Delivery and Lab	30:721:320	4	CC Lec	UM	Shared 43% *	215	160	4.70	4.24	4.24	4.24
SP15	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	9	Evaluation is not conducted for the research course				
FA14	Introduction to Pharmaceutics and Lab	30:721:496 30:721:498	4	Lec	UM	Shared 12% *	215	170	4.50	4.19	4.19	4.19
FA14	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	10	Evaluation is not conducted for the research course				
FA14	Problems in Pharmaceutics	30:721:496 30:721:498	2	CC Lab	UM	Total	3	Evaluation is not conducted for the research course				
SU14	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	8	Evalu	ation is not con	ducted for	the research cou	rse
SP14	Molecular and Cellular Pharmaceutics	15:720:614	3	CC Lec	Grad	Total	21	14	4.79	4.39	4.86	4.45
SP14	Problems in Pharmaceutics	30:721:496 30:721:498	2	CC Lab	UM	Total	4	Evalu	ation is not con-	ducted for	the research cou	rse
SP14	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Evalu	ation is not con	ducted for	the research cou	rse
SP14	Drug Delivery and Lab	30:721:320	4	Lec	UM	Shared 43% *	212	150	4.49	4.26	4.40	4.20
FA13	Regenerative Medicine	MSBS 5085S	2	Lec	Grad	Shared 9% ***	16	Evaluation was not done for the team taught course				
FA13	Introduction to Pharmaceutics and Lab	30:721:496 30:721:498	4	Lec	UM	Shared 12% *	210	61	4.0	3.92	4.0	3.91
FA13	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	5	Evalu	ation is not con	ducted for	the research cou	rse
FA13	Problems in Pharmaceutics	30:721:496 30:721:498	2	CC Lab	UM	Total	1	Evalu	ation is not con	ducted for	the research cou	rse

		- COURSE IN	FORM	MATION	-				- COURSE	E EVALU		nara Mink
									Teachir Effective (Max =	ness	Course ( (Max :	
S/ Yr	Course Title	Number	Cr	MOI	Aud	Resp	Enrl	Evaluation Responses	Instructor	Dept Mean	Instructor	Dept Mean
SU13	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	4	Evaluation is not conducted for the research course				
SP13	Drug Delivery and Lab	30:721:320	4	CC Lec	UM	Shared 43% *	208	68	4.59	4.05	4.43	4.08
SP13	Drug Delivery Fundamentals and Applications	16:125:590	2	Lec	Grad	Shared 10% *	22	Evaluation was not done for the team taught course				
SP13	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	7	Evalu	ation is not con	ducted for	the research cou	rse
SP13	Problems in Pharmaceutics	30:721:496 30:721:498	2	CC Lab	UM	Total	2	Evalu	ation is not con-	ducted for	the research cou	rse
FA12	Introduction to Pharmaceutics and Lab	30:721:301	4	Lec	UM	Shared 12% *	211	118	4.47	4.36	4.42	4.36
FA12	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	5	Evaluation is not conducted for the research course				
FA12	Problems in Pharmaceutics	30:721:496 30:721:498	2	CC Lab	UM	Total	2	Evaluation is not conducted for the research course				
SU12	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Evaluation is not conducted for the research course				
SU12	Problems in Pharmaceutics	30:721:496 30:721:498	2	CC Lab	UM	Total	2	Evaluation is not conducted for the research course				rse
SP12	Drug Delivery and Lab	30:721:320	4	CC Lec	UM	Shared 43% *	205	75	4.39	4.22	4.33	4.07
SP12	Drug Delivery Fundamentals and Applications	16:155:590	3	Lec	Grad	Shared 9% **	12	Evalu	ation was not do	one for the	e team taught cou	rse
SP12	Graduate Seminar in Pharmaceutical Sciences	16:720:601	1	CC Sem	Grad	Total	6	6	4.75	4.47	4.75	4.29
SP12	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Evalu	ation is not con	ducted for	the research cou	rse
SP12	Problems in Pharmaceutics	30:721:496 30:721:498	2	CC Lab	UM	Total	3	Evalu	ation is not con-	ducted for	the research cou	rse
FA11	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Evalu	ation is not con-	ducted for	the research cou	rse
FA11	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total		Evalu	ation is not con	ducted for	the research cou	rse
FA11	Introduction to Pharmaceutics	30:721:301	3	Lec	UM	Shared 12% *	212	78	4.08	4.14	4.08	4.09
SU11	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Evaluation is not conducted for the research course				
SP11	Drug Delivery and Lab	30:721:320	4	CC Lec	UM	Shared 43% *	230	173	4.61	4.29	4.61	4.31

		- COURSE IN	FORM	MATION		- COURSE EVALUATION -							
									Teachi Effective (Max =	ness	Course ( (Max :		
S/ Yr	Course Title	Number	Cr	MOI	Aud	Resp	Enrl	Evaluation Responses	Instructor	Dept Mean	Instructor	Dept Mean	
SP11	Nanotechnology- Based Drug Delivery	16:720:550	3	Lec	Grad	Shared 9% **	12	Evaluation was not done for the team taught course					
SP11	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	4	Evalu	ation is not con	ducted for	the research cou	rse	
SP11	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	7	Evaluation is not conducted for the research course					
FA10	Introduction to Pharmaceutics	30:721:301	3	Lec	UM	Shared 12% *	230	Evalu	ation was not de	one for the	team taught cou	irse	
FA10	Molecular and Cellular Pharmaceutics	15:720:614	3	CC Lec	Grad	Total **	11	7	5.0	4.54	4.86	4.46	
FA10	Advanced Pharmaceutics I	16:720:507	3	Lec	Grad	Shared 17% **	7	Evalu	ation was not d	one for the	e team taught cou	ırse	
FA10	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	5	Evalu	ation is not con	ducted for	the research cou	rse	
FA10	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	5	Evaluation is not conducted for the research course					
FA10	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	2	Evaluation is not conducted for the research course					
SU10	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	5	Evaluation is not conducted for the research course					
SU10	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	1	Evalu	ation is not con	ducted for	the research cou	rse	
SP10	Drug Delivery and Lab	30:721:320	4	Lec	UM	Shared 43% *	220	81	4.60	3.73	4.28	3.44	
SP10	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Evalu	ation is not con	ducted for	the research cou	rse	
SP10	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	4	Evalu	ation is not con	ducted for	the research cou	rse	
FA09	Drug Delivery II	30:721:420	3	CC Lec	UM	Shared 71% *	211	91	3.90	4.04	3.74	3.83	
FA09	Introduction to Pharmaceutics	30:721:301	3	Lec	UM	Shared 12% *	219	80	3.92	4.04	3.88	3.83	
FA09	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Evalu	ation is not con	ducted for	the research cou	rse	
FA09	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	4	Evaluation is not conducted for the research course					
SU09	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Evaluation is not conducted for the research course					
SP09	Pharmaceutical Organic Nanotechnology: Drug Delivery Principals and Applications	16:155:544	3	Lec	Grad	Shared 8% **	20	Evalu	ation was not de	one for the	team taught cou	ırse	

		- COURSE IN	FORM	MATION	-				- COURSI	E EVALU		nara Minko	
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S/ Yr	Course Title	Number	Cr	MOI	Aud	Resp	Enrl	Evaluation Responses	Instructor	Dept Mean	Instructor	Dept Mean	
SP09	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Evaluation is not conducted for the research course					
SP09	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	4	Evaluation is not conducted for the research course					
FA08	Drug Delivery II	30:721:420	3	CC Lec	UM	Shared 75%	215	127	4.83	4.46	4.76	4.23	
FA08	Advanced Pharmaceutics I	16:720:507	3	Lec	Grad	Shared 17% **	16	14	4.58	4.36	4.62	4.38	
FA08	Graduate Seminar in Pharmaceutical Sciences	16:720:601	1	CC Sem	Grad	Total	16	Evalu	ation is not con	ducted for	the research cou	rse	
FA08	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	5	Evalu	ation is not con	ducted for	the research cou	rse	
SU08	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	5	Evaluation is not conducted for the research course					
SP08	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	5	Evaluation is not conducted for the research course					
SP08	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	12	Evaluation is not conducted for the research course					
FA07	Drug Delivery II	30:721:420	3	CC Lec	UM	Shared 75%	221	107	4.84	4.57	4.80	4.46	
FA07	Molecular and Cellular Pharmaceutics	15:720:614	3	CC Lec	Grad	Shared 90% **	15	14	4.93	4.93	4.93	4.93	
FA07	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	5	Evalu	ation is not con	ducted for	the research cou	rse	
FA07	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	7	Evalu	ation is not con	ducted for	the research cou	rse	
SU07	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	5	Evalu	ation is not con	ducted for	the research cou	rse	
SU07	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	2	Evalu	ation is not con	ducted for	the research cou	rse	
SP07	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Evalu	ation is not con	ducted for	the research cou	rse	
SP07	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	8	Evalu	ation is not con	ducted for	the research cou	rse	
FA06	Drug Delivery II	30:721:420	3	CC Lec	UM	Shared 75% *	255	142	4.32	4.29	4.20	4.20	
FA06	Advanced Pharmaceutics I	16:720:507	3	Lec	Grad	Shared 17% **	13	Evalua	ation was not d	one for the	e team taught cou	rse	
FA06	Nanotechnology- Based Drug Delivery	16:720:550	3	Lec	Grad	Shared 9% **	21	Evalua	ation was not d	one for the	e team taught cou	rse	

		- COURSE IN	FORM	MATION	-		<u>Tamara Minka</u> - COURSE EVALUATION -						
									Teachi Effective (Max =	ness	Course ( (Max :		
S/ Yr	Course Title	Number	Cr	MOI	Aud	Resp	Enrl	Evaluation Responses	Instructor	Dept Mean	Instructor	Dept Mean	
FA06	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	8	Evalu	ation is not con	ducted for	the research cou	rse	
FA06	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Evaluation is not conducted for the research course					
SU06	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	7	Eval	luation was not	done for t	he research cours	se	
SP06	Drug Delivery I	30:721:320	3	Lec	UM	Shared 9% *	269	Evalu	ation was not de	one for the	e team taught cou	rse	
SP06	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	8	Eval	luation was not	done for t	he research cours	se	
SP06	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	10	Eval	luation was not	done for t	he research cours	se	
FA05	Drug Delivery II	30:721:420	3	CC Lec	UM	Total	254	167	4.76	4.16	4.72	4.06	
FA05	Graduate Seminar in Pharmaceutical Sciences	16:720:601	1	CC Sem	Grad	Total	15	Evaluation was not done for the seminar course					
FA05	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Evaluation was not done for the research course					
FA05	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	16	Evaluation was not done for the research course					
SU05	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Eval	luation was not	done for t	he research cours	se	
SU05	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	4	Eval	luation was not	done for t	he research cours	se	
SP05	Therapeutic Peptide Delivery	16:720:520	3	Lec	Grad	Shared 8% **	25	Evalu	ation was not de	one for the	e team taught cou	irse	
SP05	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	8	Eval	luation was not	done for t	he research cours	se	
SP05	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	6	Eval	luation was not	done for t	he research cours	se	
FA04	Drug Delivery II	30:721:420	3	CC Lec	UM	Total	209	92	4.61	4.61	4.40	4.40	
FA04	Molecular and Cellular Pharmaceutics	15:720:614	3	CC Lec	Grad	Total	25	22	4.77	4.77	4.73	4.73	
FA04	Advanced Pharmaceutics I	16:720:507 :01	3	Lec	Grad	Shared 17% **	20	Evalu	ation was not de	one for the	e team taught cou	rse	
FA04	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	5	Evaluation was not done for the research course					
FA04	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	8	Eval	luation was not	done for t	he research cours	se	

		- COURSE IN	FORM	MATION	-			- COURSE EVALUATION -					
									Teachi Effective (Max =	ness	Course Q (Max =		
S/ Yr	Course Title	Number	Cr	MOI	Aud	Resp	Enrl	Evaluation Responses	Instructor	Dept Mean	Instructor	Dept Mean	
SP04	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	4	Evaluation was not done for the research course					
SP04	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	8	Eva	luation was not	done for t	he research cours	e	
FA03	Drug Delivery II	30:721:420	3	CC Lec	UM	Total	168	112	4.71	3.78	4.65	3.59	
FA03	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	4	Evaluation was not done for the research course					
FA03	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	9	Eva	luation was not	done for t	he research cours	e	
SU03	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	3	Evaluation was not done for the research course					
SP03	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	2	Evaluation was not done for the research course					
FA02	Drug Delivery II	30:721:420	3	CC Lec	UM	Total	126	71	4.74	3.70	4.65	3.72	
FA02	Advanced Pharmaceutics I	16:720:507	3	Lec	Grad	Shared 17% **	32	25	4.48	3.70	4.24	3.72	
FA02	Graduate Seminar in Pharmaceutical Sciences	16:720:601	1	CC Sem	Grad	Total	8	Eva	lluation was not	done for t	he seminar cours	e	
FA02	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	3	Eva	luation was not	done for the	he research cours	e	
FA02	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	4	Eva	luation was not	done for t	he research cours	e	
SU02	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	3	Eva	luation was not	done for the	he research cours	e	
SP02	Drug Delivery I	30:721:320	3	Lec	UM	Shared 9% *	202	Evalu	ation was not d	one for the	e team taught cou	rse	
SP02	Molecular and Cellular Pharmaceutics	16:720:614	3	CC Lec	Grad	Total **	17	17	4.12	4.29	4.12	4.17	
SP02	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	3	Evaluation was not done for the research course					
SP02	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	2	Evaluation was not done for the research course					
FA01	Drug Delivery II	30:721:420	3	Lec	UM	Shared 9% *	174	Evalu	ation was not d	one for the	e team taught cou	rse	

		- COURSE IN	FORM	MATION	-				- COURSI	E EVALU		nara Minko
									Teaching Course Qualit Effectiveness (Max = 5)			
S/ Yr	Course Title	Number	Cr	MOI	Aud	Resp	Enrl	Evaluation Responses	Instructor	Dept Mean	Instructor	Dept Mean
FA01	Therapeutic Peptide Delivery	16:720:520	3	Lec	Grad	Shared 8% **	18	Evaluation was not done for the team taught course				
FA01	Graduate Research in Pharmaceutical Sciences	16:720:701	3	CC Lab	Grad	Total	2	Evaluation was not done for the research course				
FA01	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	3	Evaluation was not done for the research course				
SP01	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	1	Evaluation was not done for the research course				
SP01	Drug Delivery I and Lab	30:721:320	3	CC Lec Lab	UM	Total *	187	132	4.30	4.23	4.00	3.97
SP01	Drug Delivery II and Lab	30:721:420	3	CC Lec Lab	UM	Total *	161	110	4.18	4.23	3.92	3.97
SP01	Problems in Pharmaceutics	30:721:496	2	CC Lab	UM	Total	4	Evaluation was not done for the research course				
FA00	Advanced Pharmaceutics I	16:720:507 :01	3	Lec	Grad	Shared 17% **	14	Evaluation was not done for the team taught course				
FA00	Molecular and Cellular Pharmaceutics	15:720:614	3	Lec	Grad	Shared 14% **	18	Evalu	ation was not d	one for the	e team taught cou	ırse

<sup>\* 80</sup> min lecture

CC – Course Coordinator

Lec – Lecturer

Lab – Laboratory

Sem - Seminar

## **Doctoral and Master's Theses Supervised**

## Graduated

## **Rutgers, The State University of New Jersey**

- 1. Vera Ivanova (Fall 2009-Summer 2015), Defended Ph.D. Thesis ("Nanotechnology Approach for Inhalation Treatment of Pulmonary Fibrosis"), July 2015 (Primary Adviser T. Minko).
- 2. Ronak Savla (Fall 2012-Summer 2014), Defended Ph.D. Thesis ("Tumor Responsive Targeted Multifunctional Nanosystems for Cancer Imaging, Chemo- and siRNA Therapy"), June 2014 (Primary Adviser T. Minko).
- 3. John C. Praskavich, Jr. (Fall 2009-Summer 2014), Defended M.S. Thesis ("Calcium Voltage-Gated Ion Channels as Biological Targets for Chemoresistance in Ovarian Cancer") (Primary Adviser T. Minko).
- 4. Vatsal V. Shah (Fall 2008-Fall 2012), Defended Ph.D. Thesis ("Targeted Nanomedicine Platform for Cancer Stem Cells Specific Therapy"), December 2012 (Primary Adviser T. Minko).

<sup>\*\* 180</sup> min lecture

<sup>\*\*\* 120</sup> min lecture

- 5. Anasuya Ghosh (Fall 2006-Fall 2012) Defended Ph.D. Thesis ("Salt Solid Dispersions: A Formulation Strategy to Enhance Dissolution Rate of Poorly Water-Soluble Ionic Drugs"), October 2012 (Primary Adviser T. Minko).
- 6. Ming Zhang (Spring 2007-Fall 2011), Defended Ph.D. Thesis ("Two-in-One: Combined Targeted Chemo and Gene Therapy for Tumor Suppression and Prevention of Metastases"), January 2012 (Primary Adviser T. Minko).
- 7. Pooja Chandna (Fall 2004-Spring 2011), Defended Ph.D. Thesis ("Targeted Proapoptotic Anticancer Drug Delivery Systems"), May 2011 (Primary Adviser T. Minko).
- 8. Seema Betigeri (Fall 2003-Spring 2009), Defended Ph.D. Thesis ("Jun N-Terminal Kinase 1 (Jnk1) as a Molecular Target to Limit Cellular Mortality Under Hypoxia"), May 2009 (Primary Adviser T. Minko).
- 9. Alex M. Chen (Spring 2004-Spring 2009), Defended Ph.D. Thesis ("Nanotechnology for Efficient Delivery of Short Therapeutic Oligonucleotides and Co-delivery with Chemical Anticancer Drugs for Effective Cancer Therapy"), May 2009 (Co-Adviser T. Minko).
- 10. Oleh Taratula (Fall 2003-Fall 2009), Defended Ph.D. Thesis ("Nanotechnology in Developing Multifunctional Non-Viral Gene Delivery Systems"), May 2009 (Co-Adviser T. Minko).
- 11. Maha Saad (Fall 2005-Fall 2008), Defended Ph.D. Thesis ("Receptor-Targeted Nanocarriers for Tumor Specific Treatment and Imaging"), October 2008 (Primary Adviser T. Minko).
- 12. Yang Wang (Fall 2001-Spring 2007), Defended Ph.D. Thesis ("Hypoxia inducible factor targeted anticancer prodrug"), May 2007 (Primary Adviser T. Minko).
- 13. Refika I. Pakunlu (Spring 2001-Fall 2006), Defended Ph.D. Thesis ("Novel anticancer drug delivery system for molecular targeting of pup and nonpump cellular resistance"), May 2007 (Primary Adviser T. Minko).
- 14. Sreeja Jayant (Spring 2005-Fall 2007), Defended M.S. Thesis ("Molecular modeling, design, synthesis and evaluation of targeted polymeric prodrugs"), May 2007 (Primary Adviser T. Minko).
- 15. Sonia S. Dharap (Fall 2000-Spring 2005), Defended Ph.D. Thesis ("Molecular targeting of drug delivery systems to ovarian cancer by BH3 and LHRH peptides"), May 2005 (Primary Adviser T. Minko).

## **Ukrainian Academy of Sciences**

- 1. Olga Ezhova (Spring 1989-Spring 1993), Defended Ph.D. Thesis ("Phospholipid Composition of Lungs and Biomechanics of Breathing Under Hypoxia"), May 1993 (Primary Adviser T. Minko).
- 2. Victor Bystrjukov (Fall 1988-Fall 1992), Defended Ph.D. Thesis ("Breathing Pattern and Energy Supply Under Adaptation to Environmental Factors"), October 1992 (Primary Adviser T. Minko).
- 3. Elena Kovalenko (Spring 1983-Spring 1985), Defended M.S. Thesis ("Peculiarities of Acid Base Balance under Acute Hemorrhage"), May 1985 (Primary Adviser T. Minko).
- 4. Olga Tranko (Spring 1983-Spring 1985), Defended M.S. Thesis ("Pharmacological Correction of Lipid Peroxidation"), May 1985 (Primary Adviser T. Minko).

### Current

- 1. Sumayah Al-Mahmood (Spring 2014-Present), Pursuing M.S. (Primary Adviser T. Minko).
- 2. Justin Sapiezynski (Fall 2013-Present), Pursuing Ph.D. (Primary Adviser T. Minko).
- 3. Noor Z Kbah (Fall 2013-Present), Pursuing M.S. (Primary Adviser T. Minko).
- 4. Gaurang Patel (Spring 2013-Present), Pursuing Ph.D. (Primary Adviser T. Minko).
- 5. Andriy Kuzmov (Fall 2012-Present), Pursuing Pharm.D./Ph.D. (Primary Adviser T. Minko).

- 6. Pinak B. Khatri (Fall 2012-Present), Pursuing Ph.D. (Primary Adviser T. Minko).
- 7. Milin Shah (Spring 2009-Present), Pursuing Ph.D. (Primary Adviser T. Minko).
- 8. Carl Allenspach (Spring 2008-Present), Pursuing Ph.D. (Primary Adviser T. Minko).

## Undergraduate (Professional Pharm. D.) Honors Program Student

- 1. Andriy Kuzmov (Spring 2011 Spring 2013), Honors Thesis Title: "Lipid Nanoparticles for Inhalation Treatment of Lung Cancer".
- 2. Ronak Savla (Fall 2007 Spring 2010), Honors Thesis Title: "Targeted Quantum Dot Delivery of Doxorubicin."

## Training of Postdoctoral Fellows/Researchers

- 1. Natalia Progrebnyak, Ph.D. (2015-Present)
- 2. Oleh Taratula, Ph.D. (2009-2011)
- 3. Mahesh Patil, Ph.D. (2007-2008)
- 4. Olga B. Garbuzenko, Ph.D. (2006-Present)
- 5. Elizabeth Ber, Ph.D. (2005-2008)
- 6. Jayant Khandare, Ph.D. (2004-2006)
- 7. Anthony T. Fabbricatore, Ph.D. (2000-2001)

## **Visiting Professor**

1. A. Rubinstein, Ph.D., Professor, Hebrew University, Jerusalem, Israel (Sabbatical, January – October 2004).

### **Visiting Students**

- 1. Jue Gong, China Pharmaceutical University, Spring 2014.
- 2. Ting Xu, China Pharmaceutical University, Spring 2013.
- 3. Lauren Henderson, RISE Rutgers/UMDNJ Summer Program, Summer 2011.
- 4. V. Rani, Chemical/Biochemical Engineering, Rutgers, The State University of New Jersey, Summer 2005.
- 5. W. Tsao, Bioengineering, John Hopkins University, Summer 2003.

### **Patents:**

- 1. Nanotechnology Approach for Inhalation Treatment of Fibrosis. Contributors: **T. Minko,** O. Garbuzenko, V. Ivanova, Provisional Patent Application, RU Tech ID No. 2012-145, 2012.
- 2. Compositions and methods for delivering nucleic acid molecules and treating cancer. Contributors: **T. Minko,** L. Rodriguez-Rodriguez, O. B. Garbuzenko, O. Taratula, International Application No.: PCT/US2011/048078 (filed August 17, 2011).
- 3. E2F as a Target of Hormone Refractory Prostate Cancer. Contributors: E2F1 as an anticancer target. Contributors: J. R. Bertino, D. Banerjee, **T. Minko**, O. B. Garbuzenko, X. Xie, J. E. Kerrigan, E. E. Abali, K. W. Scotto, United States Patent 8,822,421 (issued Sep 2, 2014).

- 4. Complex drug delivery composition and method for treating cancer. Contributors: **T. Minko**, P. J. Sinko, S. Stein, United States Patent 8,124,051 (issued February, 28, 2012).
- 5. Enhanced Oral and Transcompartmental Delivery of Therapeutic or Diagnostic Agents. Contributors: S. Ramanathan, S. Stein, M. Leibowitz, P. J. Sinko, **T. Minko**, G. C. Williams, G. Zhang, X. Zhang, S. Pooyan, S. H. Park, B. Qiu, P. Paranjpe, United States Patent 7,740,882 (issued June 22, 2010).
- Method for prophylaxis and treatment of the hypoxic states in experiment. Contributors: O. V. Stefanov, S. O. Bryhinskyi, V. K. Lishko, V. P. Pozharov, T. D. Miniailenko (Minko), E. V. Rozova, M. M. Seredenko, O. V. Zubarenko, V. Y. Kondratiuk, V. O. Yukhymets, B. V. Radionov, M. I. Linnyk, Ukrainian Patent 1912, 1994.
- 7. The method of liposomes manufacturing. A. Stefanov, T. Minyailenko (**Minko**), V. Pozharov, M. Seredenko, V. Lishko, E. Rozova. USSR Patent 1424167, 1988.

# **Bibliography:**

Peer-Reviewed Papers – 135; Books/Book and Textbook Chapters/Book Reviews – 20; Extended Abstracts/Conference Proceedings – 64; Abstracts – 259.

The papers have been cited 6003 times (8244 times since 2010) and regularly highlighted by different sources. Hirsch factor is 46.

## **Peer-Reviewed Papers**

- 1. R. Savla, V. Ivanova, **T. Minko**, Nanoparticle Design Considerations for Various Imaging Purposes, Nanomedicine: Nanotechnology, Biology, and Medicine, submitted.
- 2. A. Kuzmov, **T. Minko**, Nanotechnology Approaches for Inhalation Treatment of Lung Diseases, J Control Release, 2015 Aug 18, [Epub ahead of print]. PMID: 26297206.
- 3. M. Shah, V. Shah, A. Ghosh, Z. Zhang, **T. Minko**, Molecular inclusion complexes of β-cyclodextrin derivatives enhance aqueous solubility and cellular internalization of paclitaxel: Preformulation and in vitro assessments, J Pharm Pharmacol., 2, 8-25 (2015) PMID: 25950011.
- 4. R. N. Jain, X. Huang, S. Das, R. Silva, V. Ivanova, **T. Minko**, T. Asefa, Functionalized Mesoporous Silica Nanoparticles for Glucose- and pH-Stimulated Release of Insulin, Z. Anorg. Allg. Chem. (Zeitschrift für anorganische und allgemeine Chemie, ZAAC, Journal of inorganic and general chemistry), in press (2015).
- 5. L. Y. Peddada, O. B. Garbuzenko, D. I. Devore, **T. Minko**, C. M. Roth, Delivery of antisense oligonucleotides using poly(alkylene oxide)-poly(propylacrylic acid) graft copolymers in conjunction with cationic liposomes, J Control Release. 194C, 103-112 (2014) PMID: 25192441.
- 6. O. B. Garbuzenko, J. Winkler, M. S. Tomassone, **T. Minko**, Biodegradable Janus nanoparticles for local pulmonary delivery of hydrophilic and hydrophobic molecules to the lungs, Langmuir, 30(43), 12941-12949 (2014) PMID: 25300552.
- 7. R. Savla, O. B. Garbuzenko, S. Chen, L. Rodriguez-Rodriguez, **T. Minko**, Tumor-targeted responsive nanoparticle-based systems for magnetic resonance imaging and therapy, Pharm Res, 31(12), 3487-3502 (2014) PMID:24919932, PMCID: PMC4224753.
- 8. X. Huang, Z. Tao, J. C. Praskavich, A. Goswami, J. F. Al-Sharab, **T. Minko**, V. Polshettiwar, T. Asefa, Dendritic silica microspheres (KCC-1) with fibrous pore structure possess high DNA adsorption capacity and effectively deliver genes in vitro, Langmuir, 30(36), 10886-10898 (2014) PMID: 25188675.

- 9. X. Huang, A. Goswami, X. Zou, S. Hayes, V. Shah, **T. Minko**, Z. Tao, T. Asefa, Nanostructured TiO2 catalyzed oxidations of caffeine and isocaffeine and their cytotoxicity and genotoxicity towards ovarian cancer cells, BioNanoScience, 4, 27-36 (2014).
- 10. R. Savla, V. Ivanova, **T. Minko**, Nanoparticles in the development of therapeutic cancer vaccines, Pharmaceutical Nanotechnology, 2, 2-22 (2014).
- 11. X. Xie, N. Bansal, T. Shaik, J. E. Kerrigan, **T. Minko**, O. Garbuzenko, E. E. Abali, N. Johnson-Farley, D. Banerjee, K. W. Scotto, J. R. Bertino, A novel peptide that inhibits E2F transcription and regresses prostate tumor xenografts, Oncotarget, 5, 901-907 (2014) PMID: 24658650, PMCID: PMC4011592.
- 12. O. B. Garbuzenko, G. Mainelis, O. Taratula, **T. Minko**, Inhalation treatment of lung cancer: the influence of composition, size and shape of nanocarriers on their lung accumulation and retention, Cancer Biol Med, 11(1), 44-55 (2014) PMID:24738038, PMCID: PMC3969800.
- 13. **T. Minko**, Nanotechnology Approaches to Overcoming, Suppressing and Preventing Drug Resistance, Adv Drug Deliv Rev, 65(13-14), 1665-1666 (2013) PMID: 24177352.
- 14. **T. Minko**, L. Rodriguez-Rodriguez, V. Pozharov, Nanotechnology approaches for personalized treatment of multidrug resistant cancers, Adv Drug Deliv Rev, 65, 1880-1895 (2013) PMID: 24120655.
- 15. R. Savla, **T. Minko**, Nanotechnology approaches for inhalation treatment of fibrosis, J Drug Target, 21(10), 914-925 (2013) PMID: 23978292, PMCID: PMC4219586.
- G. Mainelis, S. Seshadri, O. B. Garbuzenko, Z. Wang, T. Minko, Characterization and application of a nose-only exposure chamber for inhalation delivery of liposomal anti-cancer drugs and nucleic acids to mice, J Aerosol Med Pulm Drug Deliv, 26(6), 345-354 (2013) PMID: 23530772, PMCID: PMC3889495.
- 17. V. Shah, O. Taratula, O. B. Garbuzenko, O. R. Taratula, L. Rodriguez-Rodriguez, **T. Minko**, Targeted Nanomedicine for Suppression of CD44 and Simultaneous Cell Death Induction in Ovarian Cancer: an Optimal Delivery of siRNA and Anticancer Drug, Clin. Cancer Res., 19(22), 6193-6204 (2013) PMID: 24036854. PMC3846837.
- O. Taratula, A. Kuzmov, M. Shah, O. B. Garbuzenko, T. Minko, Nanostructured lipid carriers as multifunctional nanomedicine platform for pulmonary co-delivery of anticancer drugs and siRNA, J Control Release, 171(3), 349-357 (2013) PMID: 23648833, PMCID: PMC3766401.
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- 20. X. Xie, J. E. Kerrigan, **T. Minko**, O. Garbuzenko, K. C. Lee, A. Scarborough, E. E. Abali, T. Budak-Alpdogan, N. Johnson-Farley, D. Banerjee, K. W. Scotto, J. R. Bertino, Antitumor and modeling studies of a penetratin-peptide that targets E2F-1 in small cell lung cancer, Cancer Biol Ther, 14, 742-751 (2013) PMID: 23792570. PMCID: PMC3841214.
- 21. V. Shah, O. Taratula, O. B. Garbuzenko, M. L. Patil, R. Savla, M. Zhang, **T. Minko**, Genotoxicity of nanocarriers with different composition, architecture, size, molecular weight and charge, Current Drug Discovery Technologies, 10(1), 8-15 (2013) PMID: 22564170, PMCID: PMC3899095.
- 22. V. Ivanova, O. B. Garbuzenko, K. R. Reuhl, D. C. Reimer, V. P. Pozharov, **T. Minko**, Inhalation Inhalation treatment of pulmonary fibrosis by liposomal prostaglandin E2, Eur J Pharm Biopharm, 84, 335-344 (2013) PMID: 23228437, PMCID: PMC3660419.
- 23. M. Zhang, O. B. Garbuzenko, K. R. Reuhl, L. Rodriguez-Rodriguez, **T. Minko**, Two-in-one: combined targeted chemo and gene therapy for tumor suppression and prevention of metastases, Nanomedicine (Lond), 7(2), 185-197 (2012) PMID: 22339132.

- 24. L. Sheihet, O. B. Garbuzenko, J. Bushman, M. K. Gounder, **T. Minko**, J. Kohn, Paclitaxel in tyrosine-derived nanospheres as a potential anti-cancer agent: In vivo evaluation of toxicity and efficacy in comparison with paclitaxel in Cremophor. Eur J Pharm Sci. 45(3), 320-329 (2012) PMID: 22155544.
- 25. O. Taratula, O. B. Garbuzenko, A. M. Chen, **T. Minko**, Innovative strategy for treatment of lung cancer: targeted nanotechnology-based inhalation co-delivery of anticancer drugs and siRNA, J. Drug Target., 19(10), 900-914 (2011) PMID: 21981718.
- 26. M. Nadler-Milbauer, L. Apter, Y. Haupt, S. Haupt, Y. Barenholz, **T. Minko**, A. Rubinstein, Synchronized release of Doxil and Nutlin-3 by remote degradation of polysaccharide matrices and its possible use in the local treatment of colorectal cancer, J. Drug Target., 19(10), 859-873 (2011) PMID: 22082104.
- 27. S. Betigeri, M. Zhang, O. Garbuzenko, **T. Minko**, Non-viral delivery of siRNA or antisense oligonucleotides targeted to Jun N-Terminal Kinase 1 prevents cellular hypoxic damage, Drug Deliv. and Transl. Res., 1, 13–24 (2011) PMID: 21461383, PMCID: PMC3063508.
- 28. Savla R., Taratula O., Garbuzenko O., **Minko T.**, Tumor targeted quantum dot-mucin 1 aptamer-doxorubicin conjugate for imaging and treatment of cancer, J Control Release, 153(1), 16-22 (2011) PMID: 21342659.
- 29. M. L. Patil, M. Zhang, O. B. Garbuzenko, **T. Minko**, Multifunctional triblock nanocarrier (PAMAM-PEG-PLL) for the efficient intracellular delivery of siRNA and potent gene silencing, ACS Nano, 5(3), 1877-1887 (2011) PMID: 21322531, PMCID: PMC3062392.
- 30. O. Taratula, R. Savla, H. He, **T. Minko**, Poly(propyleneimine) dendrimers as potential siRNA delivery nanocarrier: from structure to function, Int. J. Nanotechnology, 8, 36 52 (2011).
- 31. O. Taratula, R. Savla, Y. A. Wang, H. He, **T. Minko**, Multifunctional nanomedicine platform for cancer specific delivery of siRNA by supermagnetic iron oxide nanoparticles/dendrimer complexes, Curr. Drug Delivery, 8(1), 59-69 (2011) PMID: 21034421.
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## **Extended Abstracts/Conference Proceedings**

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