

CURRICULUM VITAE

Ram I. Mahato, Ph.D. Professor and Chairman
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PERSONAL DATA

Home Address: 1206 North 130th Street
Omaha, NE 68154

EDUCATION & TRAINING

- 1983 I.Sc. (Intermediate in Science), RRM Campus, Tribhuvan University, Nepal
1989 B.S. (Pharmaceutics), China Pharmaceutical University, Nanjing, China
1992 Ph.D. (Pharmaceutics & Drug Delivery), University of Strathclyde, Glasgow, Britain
1992 **Research Associate**, Department of Pharmaceutical Sciences, University of Southern California, Los Angeles, USA
1993-94 **Postdoctoral Fellow**, Departments of Chemical Engineering and Ophthalmology, Washington University, St. Louis, USA
1994-96 **Research Scholar/Postdoctoral Fellow**, Department of Drug Delivery Sciences, Faculty of Pharmaceutical Sciences, Kyoto University, Japan

UNIVERSITY APPOINTMENTS

- 2013-Present **Professor and Chair**, Department of Pharmaceutical Sciences, University of Nebraska Medical Center, Omaha
2013-Present **Professor**, Buffett Cancer Center, University of Nebraska Medical Center, Omaha
2009-2013 **Professor**, Department of Pharmaceutical Sciences, University of Tennessee Health Science Center, Memphis
2005-2009 **Associate Professor**, Department of Pharmaceutical Sciences, University of Tennessee Health Science Center, Memphis
2001-2005 **Assistant Professor**, Department of Pharmaceutical Sciences, University of Tennessee Health Science Center, Memphis
2004-Present **Adjunct Professor**, Department of Biomedical Engineering, University of Tennessee Health Science Center, Memphis
1999-2001 **Research Assistant Professor**, Department of Pharmaceutics and Pharmaceutical Chemistry, University of Utah, Salt Lake City

OTHER WORK EXPERIENCE

- 1999 **Manager, Pharmaceutical Development**, Copernicus Therapeutics, Inc.
1996-99 **Senior Scientist, Gene Delivery Sciences**, GENEMEDICINE, INC.

HONORS AND AWARDS

- 2015 Distinguished Scientist, University of Nebraska Medical Center
- 2013 **Chair**, AAPS Nanotechnology Focus Group
- 2011 **Fellow**, CRS College of Fellow, Controlled Release Society.
- 2011 **Consultant**, Nitto Denko Corp, Oceanside, CA
- 2010 **Fellow**, American Association of Pharmaceutical Scientists (AAPS)
- 2010 **Visiting Professor**, Institute for Integrated Cell Material Sciences, Kyoto University, Japan
- 2009 **Permanent Member**, BTSS Study Section of the NIH (July 1, 2009 to June 30, 2013)
- 2009 **Invited**, Diabetes and Obesity Global Therapeutic Expert Forum, Merck & Co., May 1-3, 2009, New York
- 2007 **Nominated** for the Scientific Advisor Committee, the Controlled Release Society 2006 **Member**, *Nonviral Gene Transfer Vectors Scientific Committee*, American Society of Gene Therapy
- 2003 Who'sWho in America; *Invited Speaker*, Challenges of Antisense Oligonucleotide Delivery, 30th Controlled Release Society (CRS) Annual Meeting (Glasgow, UK, 2003);
- 1995-96 Goho Foundation Fellowship, Japan
- 1994-95 Uehara Foundations Fellowship, Japan
- 1989-92 Cancer Research Campaign PhD Studentship of the United Kingdom
- 1986 International Student Award by China Pharmaceutical University, China
Undergraduate studies supported by the Ministry of Education, Nepal, 1984-1989

EDITORIAL ACTIVITIES

- 2015-Present Journal of Neuroimmune Pharmacology
- 2006-2013 Pharmaceutical Research

Editorial Advisory Board Memberships

- 2010-Present Advanced Drug Delivery Reviews
- 2010-Present Molecular Pharmaceutics
- 2010-Present Journal of Drug Delivery
- 2010-Present World Journal of Gastrointestinal Pathophysiology
- 2009-Present Transplantation & Risk Management
- 2009-Present Inflammation & Allergy-Drug Targets
- 2004-Present Expert Opinion on Drug Delivery
- 1999-Present Journal of Drug Targeting

Referee for Journals

1. Advanced Drug Delivery Reviews
2. American Journal of Drug Delivery
3. Antiviral Research
4. Biomacromolecules
5. Biophysical Journal
6. Chemistry and Physics of Lipids
7. Clinical Pharmacokinetics
8. Critical Reviews in Therapeutic Drug Carrier Systems
9. Diabetologica
10. Drug Development Industrial Pharmacy
11. Drug Discovery Today
12. Expert Opinion on Drug Delivery
13. European Journal of Pharmaceutical Sciences
14. European Journal of Pharmaceutics and Biopharmaceutics
15. Gene Therapy
16. Human Gene Therapy
17. International Journal of Pharmaceutics
18. Journal of Controlled Release
19. Journal of Drug Targeting
20. Journal of Electrochemical Society
21. Journal of Gene Medicine
22. Journal of Pharmacology and Experimental Therapeutics
23. Molecular Pharmaceutics
24. Molecular Therapy
25. Nucleic Acids Research
26. Pharmaceutical Research
27. Proceedings of the National Academy of Sciences
28. S.T.P. Pharma Sciences.

PROFESSIONAL SOCIETY MEMBERSHIPS:

1991-present	Controlled Release Society
1996-present	American Association of Pharmaceutical Scientists
1998-present	American Society of Gene Therapy
2001-present	American Association of Colleges of Pharmacy
2002-present	American Chemical Society
2002-present	American Diabetes

Association 2003-present New York
Academy of Science
2003-present American Association for the Advancement of Science
1994-1996 Pharmaceutical Society of Japan

TEACHING EXPERIENCE:

- PHSC904: Delivery and Biocompatibility of Proteins and Nucleic Acid Drugs to graduate students
Role: Course Coordinator and Instructor
Direct Student Contact Hours: 20
Credit Hours: 3
Period: 2014-present
- PHSC 550: Introduction to Pharmaceutical Sciences to PharmD Students
Role: Instructor
Direct Student Contact Hours: 4
Credit Hours: 3
Period: 2013-present
- PHSC885: Physical Pharmacy to Graduate Students
Role: Instructor
Direct Student Contact Hours: 8
Credit Hours: 3
Period: 2014-present
- PHSC114: Pharmaceutical Principles to PharmD Students
Role: Instructor and Course Director
Direct Student Contact Hours: 20
Credit Hours: 5
Period: 2010-2013
- PHSC114: Pharmaceutics 1: Dosage Forms to PharmD Students
Role: Instructor and Course Director
Direct Student Contact Hours: 16
Credit Hours: 5
Period: 2005-2009
- PHSC222: Pharmacogenomics (2-0) Role: Instructor
Direct Student Contact Hours: 2
- PHSC111: Intro to Pharmacy & Health Care Environment Role: Instructor Direct Student Contact Hours: 15
- PHSC114.3: Pharmaceutics: Dosage Forms
Course Director: Ram I Mahato, Ph.D.
Role: Instructor
Direct Student Contact Hours: 30

Credit Hours: 3
Period: 2001-2004

- PHSC911: Delivery and Biocompatibility of Protein and Nucleic Drugs to Graduate Students
Course Director: Ram I. Mahato, Ph.D.
Role: Instructor
Direct Student Contact Hours: 45
Credit Hours: 4
Period: 2002-2013
- PHSC840: Special Topics on Site-specific Delivery of Proteins, Oligonucleotides and Genes
Course Director: Ram I. Mahato, Ph.D.
Role: Instructor
Direct Student Contact Hours: 30
Credit Hours: 3~5, depending on students
Period: 2005-2008
- PHCEU 7210: Biocompatibility [University of Utah]
Course Director: Jindrich Kopecek, Ph.D.
Role: Instructor
Direct Student Contact Hours: 9
Credit Hours: 2
Period: 2000-2001
- PHCEU 7420: Delivery of Macromolecular Therapeutic Agents [University of Utah]
Course Director: Sung Wan Kim, Ph.D.
Role: Instructor
Direct Student Contact Hours: 4
Credit Hours: 2
Period: 1999-2001

RESEARCH ACTIVITIES

Our laboratory has expertise in molecular and cell biology, biochemistry, biophysics, polymer chemistry, colloid science, pharmaceuticals, and medicine. This allows us to take a multidisciplinary approach for successful research and training students and post-doctoral fellows. Our research is focused on the following areas: (i) Micelle and Nanoparticulate Drug Delivery, (ii) Oligonucleotides, siRNA, miRNA, shRNA and Gene Delivery (iii) Synthesis of Novel Polymers, Lipopeptides, Lipopolymers and Cationic Lipids (iv) Construction of Plasmid and Adenovirus-based Gene and shRNA Expression Systems. These systems are being tested in various disease areas such as improving islet transplantation to treat type 1 diabetes, cancer (pancreatic, prostate, melanoma and medulloblastoma) and liver fibrosis.

We attempt to understand how the individual components of delivery and expression systems would influence the disease state by controlling gene regulation, transcription, translation and replication. In addition to using stem cells as gene delivery vehicle for inducing immune tolerance in diabetes and fibrosis, we are also working to overcome multi drug resistance in tumors by targeting cancer stem cells.

RESEARCH ACCOMPLISHMENTS

- *Delivery and Targeting of Oligonucleotide, siRNA and miRNA-based Therapies:* Contributed extensively on the use of antisense and antigene oligonucleotides, siRNA and miRNA for treating liver fibrosis, diabetes and cancer.
- *Cell-Based Therapeutics:* Contributed extensively on genetic modification of human islets for improved islet transplantation.
- *Polymeric Nanomedicines and Combination Therapy.* Contributed extensively on polymeric micellar delivery using novel polymers and combination therapy for treating advanced prostate cancer.
- *Cytokine Gene Therapy:* Contributed extensively on the use of interleukin-12 (IL-12), interferon-gamma (IFN- γ), vascular endothelial growth factor (VEGF) and growth hormone gene delivery to tumor and diabetes animal models.
- *Design of Gene Delivery Systems:* Developed polymer, lipid, lipopolymer and peptide-based systems to deliver and transfect oligonucleotides and genes to specific organs *in vivo* and different cell lines *in vitro*.
- *Formulation Sciences:* Formulated various small drugs, proteins, oligonucleotides and plasmids for *in vitro* and *in vivo* studies.
- *Drug Delivery and Pharmacokinetics:* Determined the pharmacokinetic profiles of small molecules, proteins, oligonucleotides and genes using mice, rats and rabbits.
- *Synthesis:* Synthesized water soluble and insoluble lipopolymers, soluble steroidal peptides, cationic lipids, and conjugated galactose, mannose and FITC to polylysine for gene delivery.
- *Particulate Carrier Systems:* Developed various polymeric nanoparticulate carrier systems.
- *Lyophilization:* Lyophilized anticancer drugs and lipid/plasmid complexes.
- *Intracellular Trafficking:* Investigated the mechanism of cellular uptake and intracellular trafficking of plasmids and oligonucleotides.
- *Adenoviral vectors:* Compared both viral and nonviral vectors for gene delivery.
 - *Key Analytical Instrumentation and Assays:* Laser Particle Sizer, Zeta Sizer, HPLC, GPC, UV Spectrophotometer, Real Time PCR, Luminometer, Gel Electrophoresis, Tissue Culture, ELISA, Protein Assays, Plasmid Amplification and Purification, Light Fluorescent, Electron and Atomic Force Microscopy, Autoradiography, Sucrose Gradient, Refractometer, Liposome Extruder, Ultracentrifugation, X-ray diffraction, Differential Scanning Calorimetry, Flow Cytometry, Immunohistochemistry, Liquid Scintillation Counter and many more.

RESEARCH SUPPORT:

ACTIVE

- **Grant/Contract Number:** 1R01GM113166
Principal Investigators: Ram I. Mahato, Ph.D. and Surinder K. Batra, PhD
Grant Title: Polymeric Nanomedicine of Hedgehog Inhibitor and miRNA for treating Pancreatic Cancer

Funding Agency: NIH/NIGMS 07/15/14-7/15/19

Direct Costs: 300,000/year

The goal of this project is to determine whether polymeric nanomedicines of hedgehog inhibitor GDC-0449 and miR-let7b can treat advanced pancreatic cancer.

- **Grant/Contract Number:** R01 CA148706-01
Principal Investigator: Wei Li, **Co-I:** Ram I. Mahato
Grant Title: Discovery of Novel Thiazole Analogs for Treating Malignant Melanoma

Funding Agency: NIH/NCI 01/01/11-12/31/20

Direct Cost: \$1,250,000

The goal of this project is to develop novel thiazole analogs which can be used to treat melanoma and enhance their delivery to melanoma tumors using polymeric nanoparticles.

- **Project Title:** In vitro prediction of in vivo performance of dry powder inhalation formulations

Principal Investigator: Ram I. Mahato

Agency: Genentech, Inc.

Period 12/01/18-11/30/20

Total Direct: \$124,000

The goal of this project is to work towards generating preliminary cell culture and mechanistic data for in vitro prediction of in vivo performance of dry powder inhalation formulations.

- **Project Title:** A Single Arm, Open Label, Phase II Study of Ruxolitinib in Sclerotic Chronic Graft-Versus-Host Disease after Failure of Systemic Glucocorticoids

Principal Investigator: Vijaya Bhatta, Co-I: Mahato, Ram I.

Agency: Incyte Corporation

Period 11/01/18-12/30/19

Total Direct: \$121, 000 for Mahato's lab

The goal of this project is to work towards analyzing patient plasma and tissue samples of patients for Ruxolitinib in Sclerotic Chronic Graft-Versus-Host Disease after failure of systemic glucocorticoids.

- **Project Title:** Co-delivery of miR-29b and Hedgehog Inhibitor for treating Medulloblastoma

Principal Investigator: Ram I. Mahato

Agency: The Edna Ittner Pediatric Research Support Fund

Period 12/01/17-12/31/18

Total Direct: \$30,000

The goal of this project is to work towards generating preliminary data on nanomedicines for treating medulloblastoma so that we can submit an R21 and R01 proposals to the NIH.

- **Project Title:** Pilot Project: Combination of GDC-0449 Anaglogs with Topotecan for treating Neuroblastoma

Principal Investigator: Ram I. Mahato

Agency: Pediatric Cancer Research Center, UNMC

Period 12/01/16-12/30/18

Total Direct: \$225,000

The goal of this project is to work towards generating preliminary data on nanomedicines for treating neuroblastoma and meduloblastoma so that we can submit an R21 and R01 proposals to the NIH.

PENDING

- **Grant/Contract Number:**

Principal Investigators: Ram I. Mahato, Ph.D.

Grant Title: Combination therapy of miRNA and hedgehog Inhibitor for treating liver fibrosis

Funding Agency: NIH 07/1/18-6/30/23

Direct Costs: 250,000/year

The goal of this project is to determine whether polymeric nanomedicines of hedgehog inhibitor GDC-0449 and miR-29b can treat liver fibrosis.

- **Grant/Contract Number:**

Principal Investigators: Ram I. Mahato, Ph.D.

Grant Title: Nanomedicines of Novel Hedgehog and Angiogenesis Inhibitors for Resistant Pancreatic Cancer

Funding Agency: NIH 7/1/18-6/30/23

Direct Costs: 250,000/year

The goal of this project is to determine whether polymeric nanomedicines of hedgehog and angiogenesis inhibitors for resistant pancreatic cancer.

RESEARCH COMPLETED IN RECENT YEARS:

- **Grant/Contract Number:** R01 EB0178531

Principal Investigator: Ram I. Mahato, Ph.D.

Grant Title: Polymeric Nanomedicines of Small Molecules and miRNA for treating Pancreatic Cancer

Funding Agency: NIH/NIBIB/NCI 07/01/14-5/31/19 (CE)

Direct Costs: 225,000/year

The goal of this project is to determine whether polymeric nanomedicines of gemcitabine and miR-205 mimic can treat pancreatic cancer.

- **Grant/Contract Number:** PC141560

Principal Investigator: Ram I. Mahato, Ph.D.

Grant Title: Collaborative Training of Undergraduate HBCU Students for Prostate Cancer Research

Funding Agency: DOD

Period 04/01/15-03/31/17

Direct Costs: 184,456

- **Grant Title:** Genetically modified stem cells and their exosomes as effective

immunomodulators to prevent GvHD and support graft engraftment

Principal Investigator: Ram I. Mahato

Agency: Nebraska Research Initiative (NRI)

Period: 07/01/15-06/30/17

Total Direct: \$100,000

The goal of this project is to determine whether genetically modified bone marrow derived stem cells and their exosomes can serve as effective immunomodulators to prevent GvHD and support islet engraftment.

Grant Title: Genetically Modified Stem Cells and their Exosomes as Effective Immunomodulators for Successful Islet Transportation.

- **Project Title:** Pilot Project: Center for Cancer Experimental Therapeutics/Early Phase Trials (PK/PD/PG)

Principal Investigator: Ram I. Mahato Agency:
Buffett Cancer Center, UNMC

Period 03/01/15-02/28/17

Total Direct: \$100,000

The goal of this project is to work towards establishing a Center for Cancer Experimental Therapeutics/Early Trials (PK/PD/PG) to help carry out clinical pharmacokinetics and pharmacogenomics of cancer drugs.

- **Grant/Contract Number: R13EB023095**

Principal Investigator: Ram I. Mahato, Ph.D.

Grant Title: Research and Development of Nucleic Acid-based Nanomedicines

Funding Agency: NIH/NIBIB

Funding Period: 07/15/2016 – 06/30/2017

Direct Costs: 10,000

The goal of this project is to host a two day symposium where speakers from the academia, pharmaceutical industries and regulatory agencies and students, postdocs and junior faculty will be invited to discuss the different aspects of drug delivery and approaches necessary for turning them in therapeutic products.

- **Principal Investigator:** Ram I. Mahato

Agency: Otis Glebe Medical Research fund - NU Foundation

Period: 03/01/15-02/28/16

Total Direct: \$100,000

The goal of this project is to determine whether genetically modified bone marrow derived stem cells and their exosomes can improve the outcome of islet transplantation.

- **Grant Number:** R13 EB020461-01

Principal Investigator: Ram I. Mahato, Ph.D.

Grant Title: Research and Development of Novel Drug Delivery Systems Symposium

Funding Agency: NIH/NIBIB

Funding Period: 07/15/2015 – 06/30/2016

Direct Costs: 10,000

The goal of this project is to host a two-day symposium where speakers from the academia, pharmaceutical industries and regulatory agencies and students, postdocs and junior faculty will be invited to discuss the different aspects of drug delivery and approaches necessary for turning them in therapeutic products.

- **W91ZSQ0209N6010001 09/20/10-9/19/15**
 Principal Investigator: Ram I. Mahato, Ph.D.
Micellar Drug Delivery and Proteomics Analysis for Effective Treatment of Resistant Prostate Cancer.
 The goal of this project is to develop micellar drug delivery systems using novel polymers for effective treatment of resistant prostate cancer.
 Total Direct: \$ 450,000
- Principal Investigator: Ram I. Mahato
 Agency: "Kosten Foundation Period"
 09/01/11-08/31/14 Total
 Direct: \$50,000 per year
 The goal of this project is to develop combination therapy to simultaneously target cancer stem cells and bulk cancer cells to advanced pancreatic cancer.
- **Polymeric Nanomedicines for Co-Delivery of Gemcitabine and miRNA**
 Principal Investigator: Ram I. Mahato 0.12 calendar months
 Agency: NIH 08/01/13-07/31/14 SPORE Grant, UNMC \$50,000
 The goal of this project is to develop micellar delivery of gemcitabine and miRNA for treating pancreatic Cancer.
- 2R01 DK069968-08 7/1/2005-5/31/2013
 Principal Investigator: Ram I. Mahato, Ph.D. (40%)
Growth Factor and Antiapoptotic Gene Delivery to Human Islets
 The goal of this competing renewal of R01 DK069968 is to develop adenovirus-based growth factor and antiapoptotic gene delivery to human pancreatic islets for treatment of type I diabetes. This proposal has received 15.4% and a priority score of 156. This is most likely to be funded.
 Total Direct: \$2,000,000
- NIH/R01 EB003922 03/1/07– 12/31/11
 Principal Investigator: Ram I. Mahato, Ph.D. (25%)
Targeted Delivery of TFOs for Treatment of Liver Fibrosis
 The major goal of this project is to targeted delivery of $\alpha 1(I)$ collagen gene promoter specific triplex forming oligonucleotides (TFOs) to liver fibrogenic cells in fibrotic rats after conjugation with mannose 6-phosphate-bovine serum albumin (M6P-BSA) via a disulfide bond.
 Total Direct: \$667,520
- NIH/NCI 5R01CA148706 01/01/11– 12/31/2015
 Co-I: Ram I Mahato (Co-I) (PI: Wei Li)
Discovery of Novel Thiazole Compounds for Treating Advanced Melanoma
 The goal of this pilot project is to establish a center for develop novel thiazole analogs which can be used to treat melanoma and enhance their delivery to melanoma tumors using polymeric nanoparticles.
- NIH/NIDDK RO1 DK064633 01/04/2004– 12/31/2008

Co-I: Ram I Mahato (Co-I) (PI: Ramareddy V. Guntaka)

A Promoter-specific TFO Prevents Liver Fibrosis

The goal of this pilot project is to investigate whether triplex forming oligonucleotide (TFO) targeting the transcription of type 1 collagen can inhibit liver fibrosis after systemic administration in rats.

Competitive Funding Received for Graduate Student Research

1. Fellowship award for the graduate research training of Yang Peng, UNMC. \$48,000 (2017-2018). Project Title: Hybrid fusion of anti-CD3 Single-chain antibody and elastin-like polypeptide as delivery vehicles of duvelisib for immunotherapy of type 1 diabetes
2. Fellowship award for the graduate research training of Ruinan Yang, UNMC. \$48,000 (2016-2017). Project Title: Combination therapy of paclitaxel and cyclopamine drug-polymer conjugates to treat chemoresistant prostate cancer
3. Fellowship award for the graduate research training of Virender Kumar, UNMC. \$23,100 (2015). Project Title: Combination of Small molecules and miRNA for treating liver fibrosis.
4. Fellowship award for the graduate research training of Vaibhav Mundra, UNMC. \$23,100 (2014). Project Title: Cell surface engineered bone marrow derived mesenchymal stem cells as cell therapy for improving human islet transplantation.
5. Travel Award to Lin Zhu, AAPS Annual Meeting in Los Angeles (2009)

SERVICE TO THE UNIVERSITY

1. Member, COP Executive Committee, University of Nebraska Medical Center (June 2013-Present)
2. Member, VC Research Meeting, University of Nebraska Medical Center (June 2013-Present)
3. Member, NCA Mission Subcommittee, University of Nebraska Medical Center (June 2014-Present)
4. Member, Dean's Advisory and Research Strategy Committees, University of Tennessee Health Science Center (UTHSC) (2012-2013)
5. Member, Molecular Resource Center (MRC), University of Tennessee Health Science Center (UTHSC) (2008-2013)
6. Member, Curriculum committees, University of Tennessee Health Science Center (UTHSC) (2003-present)
7. Member, Research Committee, UTHSC, College of Pharmacy (2004-present)
8. Member, Faculty Development Committees, UTHSC, College of Pharmacy (2005-present)
9. Member, Honors, Awards and Scholarships Committee, UTHSC, College of Pharmacy (2006-present)
10. Member, Faculty Search Committee, UTHSC College of Pharmacy (2006-present) Seminar Coordinator, UTHSC College of Pharmacy (2009-Present)

SERVICE TO PROFESSIONAL ASSOCIATIONS

2018 **Co-Chair**, Role of Nanotechnology in Immunotherapy, 5th Annual Biopharmaceutical

- Research & Development Symposium, Omaha (September 6-7, 2018)
- 2018 **Co-Chair**, Workshop on Drug Development Technologies, Omaha (March 6, 2018)
- 2017 **Co-Chair**, Research and Development of Nucleic Acid-based Nanomedicine, 4th Annual Biopharmaceutical R & D Symposium, Omaha (September 14-15, 2017)
- 2016 **Co-Chair**, Research and Development of Nucleic Acid based Nanomedicine, 3rd^h Annual Biopharmaceutical R & D Symposium, Omaha (September 14-15, 2016)
- 2015 **Co-Chair**, Nanomedicine and Biopharmaceutical R & D Symposium, Guangzhou, China (March 9-10, 2015)
- 2014 **Co-Chair**, AAPS Worskshop on Emerging Trends in Nucleic Acid and Cell-Based Therapeutics, San Diego, CA (November 2, 2014)
- 2014 **Co-Chair**, AAPS Worskshop on Emerging Trends in Gene and Cell-Based Therapy and Drug Delivery, Fudan University, Shanghai, China (April 25-26, 2014)
- 2013 **Chair**, AAPS Nanotechnology Focus Group 2013 **Member**, AAPS Jamboree Meeting 2013
- 2012 **Session Chair**, 15th International Biotechnology Symposium & Exhibition, Daegu, Korea, 17-20, 2012
- 2012 **Session Chair**, SPIE Nanosystems in Engineering & Medicine Congress, Incheon, Korea, 9-13 Sepmetber, 2012
- 2012 **Chair**, AAPS Nanotechnology Focus Group (elected)
- 2011 **Session Chair**, Bioactive Materials: Regenerative Medicines, 32nd 38th Annual Meeting & Exposition of the Controlled Release Society, Washington DC, August 2, 2011.
- 2011 **Session Chair**, Plus/Minus Complexes, 15th International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, UT, February 13-16, 2011
- 2008 **Session Chair**, Site-specific Delivery and Targeting of Nucleic Acids for treating Fibrosis, 2008 National Biotechnology Conference (NBC), Toronto, Canada (June, 2008)
- 2008 **Member**, CRS 2008 Educational Workshop Review Committee, 35th *Controlled Release Society Annual Meeting* (New York, NY, 2008)
- 2007 **Member**, 2007 CRS/Jorge Heller Journal of Controlled Release Award Committee.
- 2007 **Session Chair**, Nanoencapsulation I, 34th *Controlled Release Society Annual Meeting* (Long Beach, California, July, 2007)
- 2007 **Session Chair**, Solutions to Novel Drug Delivery System, 5th Annual Drug Discovery Conference and Expo (IDDST), Shanghai, China, May 27-31, 2007.
- 2006 **Member**, Nonviral Gene Transfer Vectors Scientific Committee, American Society of Gene Therapy; *Controlled Release Society (CRS) Board of Scientific Advisors* (nominated)
- Symposium Chair**, Biomaterials for Site-specific Delivery of Oligonucleotides and siRNA; and Emerging Trends in Cell-Based Therapeutics, *National Biotechnology Conferences* (June 18-21, Boston, MA)
- 2006 **Session Chair**, Delivery, Transport and Transcription, 9th Annual Meeting of American Society of Gene Therapy (ASGT), Baltimore, MD, May 31-June 4, 2006.
- 2005 **Short Course Chair**, Pharmaceutical Perspectives of Synthetic and Hybrid Vectors-based Nucleic Acid Therapeutics, 2005 AAPS Annual Meeting and Exposition (Nashville, 2005)
- 2004 **Workshop Chair**, Pharmaceutical Perspectives of Nucleic Acid-Based Therapeutics, 31st Controlled Release Society (CRS) Annual Meeting (Hawaii, 2004)
- 2002 **Session Chair**, Therapeutic Gene/Oligonucleotide Delivery, 29th CRS Annual Meeting (Seoul, Korea, 2002)

1998 **Co-moderator**, Roundtable Presentation on Disposition of Nonviral Gene Delivery Systems, AAPS Annual Meeting (San Francisco, CA, 1998)

NATIONAL AND INTERNATIONAL SCIENTIFIC REVIEW PANELS

1. Florida Department of Health Grant Review, OakRidge Review, December 2018.
2. ZDK1 GRB-N (O3) Special Emphasis Panel Meeting: RFA-DK-17-020: Immune System Engineering For Targeted Tolerance in Type 1 Diabetes, July 25, 2018.
3. ZRG1 BST-U(10) Small Business (SBIR/STTR) Review, March 22-23, 2017
4. NIDDK ZDK1 GRB-N (O1) Review Panel, "RFA-DK-17-003: Therapeutic Targeting of The Human Islet Environment (UC4) Review Panel, June 23, 2017.
5. NCI-IMAT 2017: ZCA TCRB-W O1 Special Emphasis Panel/Scientific Review Group, Washington, DC. June 30, 2017.
6. Pennsylvania Formula Grant Final Performance Review-17-18 Cycle A, October 19-Nov 30, 2017
7. ZTR1 CG-8: R13/U15 NIH grant reviewer, November 8, 2017
8. New York Stem Cell Cancer I Generic Peer Review, Arlington, VA, September 26-28, 2016.
9. ZRG1 F05-D (21) Fellowship Cell Biology, Developmental Biology and Bioengineering Special Emphasis Panel, NIH, March 22-23, 2016 in Bethesda, MD.
10. Florida Department of Health, Oak Ridge Associated Universities, December 16, 2015
11. Co-Chair, SEP-12 ZCA1 TCRB-T (02) Study Section meeting, NIH, July 30, 2015.
12. Nazarbayev University Grant Review, Oak Ridge Associated Universities, 2015.
13. 2013 PCRP Laboratory Clinical Transition Award, Department of Defense, December 4-5, 2013.
14. Pennsylvania Final Review Performance Review, 12-13 Cycle A, Oak Ridge Associated Universities, 2012 and 2013.
15. National Institutes of Health, Bioengineering, Technology and Surgical Sciences (BTSS) Study Section, February, May and October, 2012 and 2013
16. 2011 PCRP Discovery, Pancreatic Cancer-2, Department of Defense, January, 2012.
17. 2011 PCRP Clinical & Experimental Therapeutics #2 Panel Meeting, Department of Defense, October 12-14, 2011.
18. Pennsylvania Final Review Performance Review, 11-12 Cycle A, Oak Ridge Associated Universities, 2011.
19. National Institutes of Health, Bioengineering, Technology and Surgical Sciences (BTSS)

Study Section, February 6-8, May 16-17 & Oct, 2011

20. 2010 Prostate Cancer Research Program - PRE-CET-D, Department of Defense, April 2010.
21. National Institutes of Health, Bioengineering, Technology and Surgical Sciences (BTSS) Study Section, February 11-12, May 17-18 & Oct 11-12, 2010.
22. Susan G. Komen for the Cure: Localized Chemotherapies, 2010
23. Estonian Science Foundation, September 2009
24. Nanyang Technological University, Singapore, August 2009
25. PCR Clinical & Experimental Therapeutics #1 Panel Meeting, Department of Defense, July 26-28, 2009.
26. 2009/10 ZRG1 SBIB-V (58) RFA OD-09-003 NIH Challenge Panel#23 and BST-M (58) RFA OD-09-003 Challenge Grants Panel 4
27. National Institutes of Health, Bioengineering, Technology and Surgical Sciences (BTSS) Study Section, February 8-9, May 18-19 & October 6-7, 2009
28. World Class University (WCU) International Review Panel, WCU-KOSEF, Washington, DC., April 5-6, 2009.
29. 2009 Prostate Cancer Research Program - PRE-CET-B, April 2009.
30. Susan G. Komen for the Cure: Localized Chemotherapies, 2009.
31. National Institutes of Health, Bioengineering, Technology and Surgical Sciences (BTSS) Study Section, February 4-5, May 18-19 and October 6-7, 2008.
32. Clinical & Experimental Therapeutics-3 (CET-3) Panel Meeting, Department of Defense, July 20-22, 2008.
33. Susan G. Komen for the Cure Panel Meeting at Alexandria, VA, January 10-11, 2008.
34. National Institutes of Health, Special Emphasis Panel on Enzyme Assessment Core, NIDDK, November 15, 2007.
35. Clinical & Experimental Therapeutics-3 (CET-3) Panel Meeting, Department of Defense, August 15-17, 2007.
36. Israel Science Foundation, March 2007.
37. Wellcome Trust, Great Britain, January 2007.
38. Alberta Heritage Foundation for Medical Research, Canada, December 2006.
39. National Institutes of Health, Nanoscience and Nanotechnology, Washington D.C., July, 2004.

40. National Institutes of Health, Nanoscience and Nanotechnology (Washington D.C., March 2004
41. James and Esther King Biomedical Research Program, 2004-Present.
42. Engineering & Biological Systems (EBS) of Great Britain, April, 2004.
43. American Institute of Biological Sciences, October-November, 2002.
44. National Institutes of Health, Gene Therapy Panel, March, 2002.

JOURNAL THEME ISSUE EDITOR

1. Li F and **Mahato RI** (Eds) Bioconjugate Therapeutics: Current Progress and Future Perspective (2017) *Mol Pharm* 14: 1321-1324, 2017.
2. Reynolds J and **Mahato RI** (Eds) Nanomedicines for the Treatment of CNS Diseases. *J Neuroimmune Pharmacol.* 12: 1-5, 2017.
3. Li F and **Mahato RI** (Eds) miRNAs as Targets for Cancer Treatment: Therapeutics Design and Delivery (2015). *Adv Drug Del Rev* **8**: 1-198.
4. Wang D and **Mahato RI** (Eds) Engineered Biomimetic Tissue Platforms for in vitro Drug Evaluation (2014). *Mol Pharm* 11(7): 1931-2.
5. Cheng K and **Mahato RI** (Eds) Biological and Therapeutic Applications of Small RNAs (2011). *Pharm Res* **28**: 2961-5.
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Review Articles

1. Mondal G, Tan C and Mahato RI. Tailor made organic nanocarriers for delivery of therapeutic agents for cancer treatment (*Manuscript in preparation*)
2. Chen M, Wu C, Zhou X, Chen R, Wang J, Wu C, Ye RD and Mahato RI. Nano-carriers for delivery and targeting of active ingredients of Chinese medicine for hepatocellular carcinoma therapy. *Materials Today* (in Press)
3. Bariwal J, Kumar V, Dong Y and **Mahato RI** (2018) Design of Hedgehog and pathway inhibitors for cancer treatment. *Med Chem Rev.* (ePub ahead of print)
4. Giri BR, Raiz F, **Mahato RI** and Cheng G (2018) Roles of miRNA in T cell immunity: implications for strategy development against infectious diseases biotechnology advances. *Med Chem Rev.* (ePub ahead of print)
5. Su Q, Kumar V, Sudh N and **Mahato RI** (2018) Role of MicroRNAs in the Pathogenesis and Treatment of Progressive Liver Injury in NAFLD and Liver Fibrosis. *Adv Drug Deliv Rev* **129**:54-63.
6. Chaudhary AK and Mahato RI (2018) The fourth annual BRDS on genome editing and silencing for precision medicines. *Drug Deliv Transl Res.* **8**: 266-272.

7. Date T, Nimbalkar V, Kamat J, Mittal A, **Mahato RI** and Chitkara D (2018) Lipid-Polymer Hybrid Nanocarriers for Delivering Cancer Therapeutics. *J Control Release* **271**: 60-73.
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9. Kumar V, Kumar V, McGuire T, Coulter DW, Sharp JG and Mahato RI (2017) Challenges and Recent Advances in Medulloblastoma Therapy. *Trends Pharmacol Sci*. 38: 1061-1084.
10. Dutta R and **Mahato RI** (2017) Recent Advances in Hepatocellular Carcinoma Therapy. *Pharmacol Ther* 1. Dutta R and Mahato RI (2017) Recent Advances in Hepatocellular Carcinoma Therapy. *Pharmacol Ther* **173**: 106-117.
11. Chaudhary AK and **Mahato RI** (2017) The third annual BRDS on research and development of nucleic acid-based nanomedicines. *Drug Deliv Transl Res*. **7**: 188-193.
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14. Chitkara D, Mittal A and **Mahato RI** (2015) miRNAs in pancreatic cancer: Therapeutic potential, delivery challenges and strategies. *Adv Drug Deliv Rev* **81**: 34–52.
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16. Mundra V and **Mahato RI** (2014) Design of nanocarriers for efficient cellular uptake and endosomal release of small molecule and nucleic acid drugs: Learning from viruses, *Front Chem Sci Eng* **8**: 387–404.
17. Li F and **Mahato RI** (2014) MicroRNAs and drug resistance in prostate cancers. *Mol Pharm*. **11**: 2539-52.
18. Wu H and **Mahato RI** (2014) Mesenchymal stem cell-based therapy for type 1 diabetes. *Discov Med*. **17**: 139-43.
19. Mundra V, Gerling IC and **Mahato RI** (2013) Mesenchymal stem cell-based therapy. *Mol Pharm* **10**: 77-89.
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25. Zhu L and **Mahato RI** (2010) Lipid and polymeric carrier-mediated nucleic acid delivery. *Expert Opin Drug Deliv* **7**: 1209-26.
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disease gene therapy. *Adv Drug Del Rev* 61: 614-622.

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29. Ye Z, Houssein HSH and **Mahato RI** (2007) Bioconjugation of Oligonucleotides for Treating Liver Fibrosis. *Oligonucleotides* **17**: 349-404.
30. Cheng K and **Mahato RI** (2007) Gene modulation for treating liver fibrosis. *Crit Rev Ther Drug Carrier Syst* **24**:93-146.
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33. **Mahato RI** (2005) Water insoluble and soluble lipids for gene delivery. *Adv Drug Del Rev* **57**: 699-712.
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Book Chapters

1. Wu H, Chaudhary AK and **Mahato RI** (2018) Gene therapy. In: Crommelin DJA, Sindelar

- RB and Meibohm B (edited) *Pharmaceutical Biotechnology*, 5th Edition. Springer.
2. Chaudhary AK, Bhattarai RS, Tan C, Gurumurthy CB and **Mahato RI** (2018) Genomic engineering utilizing CRISPR/Cas system and its application in cancer. In: Chitkara, Mittal and Mahato (edited): *Molecular Medicines for Cancer: Concepts and Applications of Nanotechnology*, CRC Press.
 3. Evande RE, Dutta R, Tan C, Grem JL and **Mahato RI** (2016) Pharmacogenomics of Neurodegenerative Diseases: Roles Personalized Medicines. In: Ikezu T and Gendelman H (ed) *Neuroimmune Pharmacology* 2nd Edition, Springer.
 4. Kumar V, Wen D and **Mahato RI** (2016) Non-Viral Delivery of Nucleic Acid Complexes. In **Ducheyne P**, , Healy K, Huttmacher D, Grainger D and Kirkpatrick J (eds) *Comprehensive Biomaterials II*, Elsevier, Inc.
 5. Li F and **Mahato RI** (2013) Role of promoters and miRNA backbone for efficient nuclear export of shRNA. In: Cheng K and Mahato RI (eds) *Advanced Delivery and Therapeutic Applications of RNAi*, John Wiley & Sons, Inc.
 6. Narang AS and **Mahato RI** (2013) Bioavailability and Bioequivalence. In Dash A (edited) *Pharmaceutics: Basic Principles and Application to Pharmacy Science*, Elsevier.
 7. Desu HR, Narang AS and **Mahato RI** (2013) Liquid dose forms. In Dash A (edited) *Pharmaceutics: Basic Principles and Application to Pharmacy Science*, Elsevier.
 8. Wu H and **Mahato RI** (2013) Gene therapy. In Crommelin, Sindelar and Meibohm (edited) *Pharmaceutical Biotechnology. Fundamentals and Applications*, 4th Edition, Informa
 9. Narang AS and **Mahato RI** (2010) Therapeutic potential of targeted drug delivery. In: Narang AS and Mahato RI (eds) *Targeted Delivery of Small and Macromolecular Drugs*, CRC Press, Inc.
 10. Panakanti R and **Mahato RI** (2010) Recent advances in gene expression and delivery systems. In: Narang AS and Mahato RI (eds) *Targeted Delivery of Small and Macromolecular Drugs*, CRC Press, Inc.
 11. Yang N and **Mahato RI** (2010) Delivery and targeting of oligonucleotides and siRNA. In: Narang AS and Mahato RI (eds) *Targeted Delivery of Small and Macromolecular Drugs*, CRC Press, Inc.
 12. Narang AS and **Mahato RI** (2010) Targeting Colon and Kidney: Pathophysiological Determinants of Design Strategy. In: Narang AS and Mahato RI (eds) *Targeted Delivery of Small and Macromolecular Drugs*, CRC Press, Inc.
 13. Cheng G, Danquah M and **Mahato RI** (2009) MicroRNAs as therapeutic targets for cancer. In: Lu Y and Mahato RI (eds) *Pharmaceutical Perspectives of Cancer Therapeutics*. Springer, New York, NY.
 14. Cheng K and **Mahato RI** (2006) Biopharmaceutical Challenges: Pulmonary Delivery of Proteins and Peptides. In: Meibohm B (ed) *Pharmacokinetics and Pharmacodynamics of Biotech Drugs*, Wiley-VCH Verlag GmbH & Co, Weinheim, p. 209-242.
 15. **Mahato RI**, Ye Z and Kim WS (2006) Water soluble lipopolymers and lipopeptides for nucleic acid delivery. In: Friedmann T and Rossi J (eds) *Gene Transfer: Delivery and expression of DNA and RNA, A Laboratory Manual*, Cold Spring Harbor Laboratory Press, New York, p. 501-506.

16. **Mahato RI** and Kim SW (2005) Water soluble lipopolymers for gene delivery. In Amiji MM (ed) *Polymeric Drug Delivery: Principles and Applications*, CRC Press, Boca Raton, FL, p 175-186.
17. **Mahato RI**, Ye Z and Guntaka RV (2005) Antisense and Antigene Oligonucleotides: Structure, Stability and Delivery. In Mahato RI (ed) *Biomaterials for Delivery and Targeting of Protein and Nucleic acid Drugs*, CRC Press, Boca Raton, FL
18. **Mahato RI** (2004) Pharmaceutical delivery systems and dosage forms. In Gourley D and Eoff J (eds) *APhA's Complete Review for Pharmacy*, Castle Connolly Publishers, New York, p 37-63.
19. **Mahato RI** and Tomlison E (2001) Plasmid-based gene therapy. In: AM Hillery, AW Lloyd and J Swarbrick (eds) *Drug Delivery and Targeting: For Pharmacists and Pharmaceutical Scientists*, Taylor & Francis, London, pp. 372-397.
20. **Mahato RI**, Furgeson DY, Maheshwari A, Han SO and Kim SW (2000) Polymeric gene delivery for cancer treatment. In: K.D. Park, I.C. Kwon, N. Yui, S.Y. Jeong and K. Park (eds) *Biomaterials and Drug Deliver towards New Millennium*, Han Rim Won Publishing Co., Seoul, Korea, pp. 249-280.
21. Takakura Y, **Mahato RI**, Nomura T, Sawai K, Yoshida M, Kanamaru T and Hashida M (1995) Development of delivery systems for antisense oligonucleotides. In: Ogata N, Kim SW, Feijen J and Okano T (eds) *Advanced Biomaterials in Biomedical Engineering and Drug Delivery Systems*, Springer, New York, p. 357-358.

INVITED SPEAKERS (NATIONAL/INTERNATIONAL MEETINGS AND UNIVERSITIES):

1. Dual Responsive Polymeric Micelles Capable of Modulating miR-34a to Treat Taxane Resistant Prostate Cancer, ***END2Cancer: Emerging Nanotechnology and Drug Delivery Applications for Cancer Conference***, Oklahoma City (December 5-7, 2018)
2. Polymeric Nanomedicine of Small Molecules and miRNA for treating Pancreatic Cancer. 2018 China Pharmaceutical Conference, Guangzhou (December 1, 2018)
3. pH and ROS Responsive Polymeric Nanomedicine of miRNA and Small Molecules for Cancer Treatment, West China School of Pharmacy, Sichuan University of Houston (November 29, 2018)
4. Polymeric Nanomedicine of miRNA and Small Molecules for Cancer Treatment, Department of Polymeric Materials, Tongji University, Shanghai, China (November 27, 2018)
5. Polymeric Nanomedicine of Small Molecules and Noncoding RNA for Pancreatic Cancer. College of Pharmacy, University of Houston (September 13, 2018)
6. Polymeric Nanomedicine of Small Molecules and Noncoding RNA for Pancreatic Cancer. University of Hong Kong (June 27, 2018)
7. Development of Nanomedicines for treating Liver Fibrosis: Formulation, Biodistribution and Therapeutic Efficacy in Animal Models. Shenzhen Institute for Drug Control, China (June 26, 2018)
8. Design of Polymeric Nanomedicine of Small Molecules and miRNA for Pancreatic Cancer. Sun Yat-Sen University, Guangzhou, China (June 25, 2028)
9. Dual Responsive Micelles Capable of Modulating miR-34a to Combat Taxane Resistance in Prostate Cancer. *Chinese Conference on Research and Development Technologies of Delivery Systems of Traditional Chinese Medicine*, Nanchang, Jianxi, China (June 22-24, 2018).

10. Nanomedicine for treating Prostate Cancer. GU Oncology Focus Group, UNMC, March 23, 2018.
11. Polymeric Nanomedicine of Small Molecules and miRNA for Treating Pancreatic Cancer. Kansas State University, March 13, 2018.
12. Nanomedicines in Cancer- What Does Nowrk in Translation to Clinic and Why?, AAPS Annual Meeting and Exposition, San Diego, CA, November 12- 15, 2017.
13. Role for miRNA-205 in Gemcitabine Resistant Pancreatic Cancer, 2017 TechConnect World Innovation Conference, Washington DC, May 15-17, 2017
14. Combination of Gene and Stem Cell Therapy for Improved Cell and Organ Transplantation, College of Pharmacy, University of Pittsburgh, April 18, 2017
15. Nanomedicines of miRNA and Small Molecules for treating Pancreatic Cancer, International Symposium on Drug Delivery and Pharmaceutical Sciences: Beyond the History, Kyoto, Japan, March 10, 2017
16. Role of microRNA-205 in Gemcitabine Resistant Pancreatic Cancer, Hanyang University, Seoul, Korea, March 8, 2017
17. Recent Advances in Nucleic Acid-based Therapeutics, Hong Kong Pharmacy Conference, February 18-19, 2017
18. Precision Medicine of Small Noncoding RNA and Small Molecules for treating Liver Fibrosis, Chinese University of Hong Kong, February 17, 2017.
19. Precision medicines of small noncoding RNA and small molecules for treating liver fibrosis. **Tongji University, Shanghai**, China, December 7, 2016.
20. Polymeric nanomedicines of miRNA and small molecules for treating pancreatic cancer. **China Pharmaceutical University**, Nanjing, December 6, 2016.
21. Combination therapy for treatment of advanced and metastatic cancer. **Nanjing University**, December 6, 2016.
22. Design, synthesis and evaluation of novel hedgehog inhibitors for treating advanced metatic cancer. **UNMC Pediatric Cancer Research Program (PCRP)**, December 1, 2016.
23. Polymer-drug conjugates for treating resistant and metastatic cancer. **Mayo Clinic Angiogenesis Symposium**, Amelia Island, FL, November 18-20, 2016.
24. Combination therapy of small molecule hedgehog inhibitor and miRNA for treating pancreatic cancer. **Department of Cheimistry, University of Nebraska Omaha**, October 10, 2016.
25. Micellar delivery of miRNA and small molecules for treating pancreatic and prostate cancers. **35th Annual GRASP Conference, Florida A&M University College of Pharmacy**, July 22-24, 2016.
26. Combination therapy of small molecule hedgehog inhibitor and miRNA for treating pancreatic and prostate cancers. **Department of Cheimistry, University of Nebraska Lincoln**, April 25, 2016.
27. Combination of Hedgehog Inhibitor and siRNA/miRNA for treating Liver Fibrosis. **University of Utah College of Pharmacy, Salt Lake City**, February 22, 2016.'
28. Polymeric nanomedicines of miRNA and small molecules for treating pancreatic cancer. **University of Georgia**, Athens, GA, September 2, 2015
29. Adult mesenchymal stem cells and their exosomes: an immunoregulatory regeneration therapy for type 1 diabetes, **Sanford Research Alex Rabinovitch Type 1 Diabetes**

Symposium, Sioux Falls, SD, June 18-19, 2015.

30. Polymeric nanomedicines of miRNA and small molecules for treating pancreatic cancer, **Nanomedicines and Biopharmaceutical R & D Symposium**. Guangzhou, China (March 9, 2015)
31. Nanomedicines of miRNA and hedgehog inhibitors for treating liver injury and fibrosis, **Institute of Life and Health Engineering, Jinan University**, Guangzhou, China (March 10, 2015)
32. Polymeric mcelles of miRNA and small molecules for treating pancreatic cancer, **College of Pharmacy, Peking University, Beijing**, China (March 11, 2015)
33. Nanomedicines of miRNA and hedgehog inhibitors for Treating Liver Fibrosis, **Tsinghua University, Guangzhou, China** (March 12, 2015)
34. Nanomedicines of miRNA and small molecules for treating pancreatic cancer, **AAPS Workshop on Emerging Trends in Nucleic Acid and Cell-Based Therapeutics**. San Diego, CA (November 2, 2014)
35. Polymeric nanomedicines of small molecule drugs and miRNA for treating Advanced Pancreatic and Prostate Cancers. **Society of Biomaterials Student Chapter, University of South Dakota**, Vermillion, SD (October 3, 2014).
36. Polymeric Nanomedicines of Small Molecules and miRNA for treating Advanced Pancreatic and Prostate Cancers, **Mayo Clinic Angiogenesis Symposium**, Rochester, MN (August 22-24, 2014)
37. Combination of Gene and Cell-based Therapy for improving the Outcome of Islet Transplantation in Humanized Mice. AAPS Worskshop on **Emerging Trends in Gene and Cell-Based Therapy and Drug Delivery**, **Fudan University, Shanghai, China** (April 25-26, 2014)
38. Polymeric Nanomedicines of Small Molecule Drugs and miRNA for Treating Pancreatic Cancer, **Eppley Science Hall, University of Nebraska Medical Center**, Omaha, January 16, 2014.
39. Delivery and Targeting of Small and RNA Molecules for Treating Liver Diseases, **VA Hospital, Omaha, NE**, September 13, 2013.
40. Emerging Trends in Development of Small Molecules, siRNA and miRNA-based Therapeutics, **East China Normal University, Shanghai, China**, September 12, 2013.
41. Roles of Chemoresistance, Cancer Stem Cells and miRNA in treating Cancer using Polymeric Nanomedicines, **Fudan University, Shanghai, China**, September 10, 2013
42. Nanomedicines Targeting Chemoresistance, Cancer Stem Cells and miRNA for effective treatment of Prostate and Pancreatic Cancer, **China Pharmaceutical University, Nanjing, China**, September 11, 2013.
43. Roles of Chemoresistance, Cancer Stem Cells and miRNA in treating Cancer using Polymeric Nanomedicines, Department of Pharmaceutical Sciences, **Mercer University, Atlanta, GA**, September 6, 2013.
44. Emerging Trends in Development of Small Molecules, siRNA and miRNA-based Therapeutics. **International Conference of Bioeconomy, Tianjin, China**, June 25-26, 2013.
45. Emerging Trends in Combination Therapy with RNAi. **14th Annual Meeting of American Society of Gene and Cell Therapy (ASGCT)**, Salt Lake City, May 15-18, 2013.

46. Combination of Stem Cells and Gene Therapy for Improving Islet Transplantation. **Seoul National University**, Korea, September 11, 2012.
47. Polymeric Nanomedicines for treating Pancreatic Cancer, **Pohang University of Science and Technology (POSTECH)**, Korea, September 18, 2012.
48. Roles of Cancer Stem Cells and miRNA in treating Cancer using Polymeric Nanomedicines. **Nanyang University, Singapore**, September 14, 2012.
49. Delivery and Targeting of RNA Molecules for Treating Liver Diseases. **15th International Biotechnology Symposium and Exhibition**, Daegu, Korea, September 16-21.
50. Emerging Trends in RNA-based Combination Therapy. Global RNAi Carrier Initiative Symposium and Workshop, **Korea Institute of Science & Technology (KIST)**, Seoul, Korea, July 4-6, 2012.
51. Impact of Polymeric Nanomedicine on miRNA, Cancer Stem Cells and Chemoresistance. **SPIE: Nanosystems in Engineering and Medicines, Incheon, Korea**, Sep 10-12, 2012,
52. Stem Cells and Gene Therapy for Improved Islet Transplantation. Endocrine Grand Round at the **University of Tennessee** Division of Endocrinology, Diabetes & Metabolism, May 3, 2012.
53. Roles of Chemoresistance, Cancer Stem Cells and miRNA in treating Cancer using Polymeric Nanomedicines, Center for Drug Delivery and Nanomedicine, **University of Nebraska Medical Center**, April 19, 2012Aaa
54. Biodistribution and Cellular Uptake of Oligonucleotides for treating Liver Fibrosis, **Bristol Myers Squibb, Princeton, NJ**, April 12, 2012.
55. Delivery and Targeting of siRNA and shRNA, **Bristol Myers Squibb**, Princeton, NJ, April 12, 2012.
56. Polymeric Nanomedicines for treating Pancreatic and Prostate Cancer, **North Dakota State University School of Pharmacy**, February 23, 2012.
57. Combination of Stem Cells and Gene Therapy for Improved Islet Transplantation. **University of Colorado School of Pharmacy**, Denver, CO, Sep 22, 2011.
58. Bench to Business: Innovate or Perish. Departmental Seminar, **University of Tennessee College of Pharmacy**, Aug 29, 2011.
59. Design Elements and Formulation Factors for Efficient Gene and siRNA Delivery. Workshop on Understanding the Organization of the Intracellular Region, **University of Memphis**, June 23-24, 2011.
60. Site-Specific Delivery of Oligonucleotides and siRNA for Treating Liver Fibrosis, **Nitto Denko Technological Corp**, Oceanside, CA, May 5, 2011.
61. Bioconjugation for Site-specific Delivery of Olinucleotides and siRNA for treating Liver Diseases, **UTHSC Nanodays**, March 30, 2011.
62. Polymeric Nanomedicines for treating Advanced Prostate Cancer. **National Institute of Pharmaceutical Research (NIPER), Mohali, Punjab, India**, March 21, 2011.
63. Hedgehog Inhibitors Attenuate Ischemia Reperfusion Injury in Normal and Cholestatic Rat Livers. **Postgraduate Institute of Medical Education & Research (PGIMER), Chandigarh, India**, March 21, 2011.
64. Polymeric Nanomedicines and Combination Therapy for treating Advanced Prostate Cancer. **Center for Biomedical Engineering, National Institute of Technology (IIT), New Delhi**,

India, March 22, 2011.

65. Bioconjugation for Site-Specific Delivery of Oligonucleotides and siRNA for Treating Liver Fibrosis, **NIPER, Hyderabad, India**, March 23, 2011.
66. Mesenchymal Stem Cells as Gene Delivery Vehicles for Successful Islet Transplantation. **Delhi Institute of Pharmaceutical Sciences and Research (DIPSAR), New Delhi, India**, March 23, 2011.
67. Delivery and Targeting of Oligonucleotides and siRNA for treating Liver Diseases **International Conference on Biomaterials Science 2011: In Honor of Prof Kazunori Kataoka's 60th Birthday**, March 15-18, 2011.
68. Mesenchymal Stem Cell-based Gene Therapy for improving the Outcome of Islet Transplantation. **Division of Endocrinology Grand Rounds, University of Tennessee Health Science Center**, August 12, 2010.
69. Site-Specific Delivery and Targeting of Oligonucleotides and siRNA for treating liver diseases. **International Forum on Liver Disease, Huai'An, China**, June 11-13, 2010.
70. Polymeric Nanomedicines for Treating Advanced Prostate Cancer, Institute of Biological Sciences and Biotechnology, **Donghua University, Shanghai, China**, June 9, 2010.
71. Novel Amphiphilic Copolymers for Micellar Drug Delivery and Combination Therapy for Treating Prostate Cancer, **East China University of Science and Technology**, Shanghai, China, June 9, 2010.
72. Gene Expression and Silencing for Improved Islet Transplantation, **Shanghai Veterinary Research Institute, Chinese Academy of Agricultural Sciences**, June 10, 2010.
73. Polymeric Nanomedicines and Combination Therapy for the Treatment of Advanced Prostate Cancer, **Biomedical Polymers for Drug Delivery 2010: In Honor of Prof Jindrich Kopecek's 70th Birthday**, March 26-27, 2010.
74. Polymeric Nanomedicines and Combination Therapy for treating Resistant Prostate Cancer, **Institute for Inovative NanoBio Drug Discovery and Development, Kyoto University**, Japan, December 5, 2009.
75. Polymeric Micelle-based Combination Therapy for Treating Advanced Prostate Cancer. **California NanoSystems Institute, University of California**, Los Angeles, November 12, 2009.
76. Non-viral-based Gene Delivery: Obstacles, Challenges and O, **Annual American Physical Society Meeting**, Pittsburgh, PA, March 16-20, 2009.
77. Gene Delivery and Silencing for Improved Human Islet Transplantation, **SMi Group's 6th Conference on Controlled Release**, London, UK, March 11-12, 2009.
78. Viral and Nonviral Gene Delivery, Department of Pharmacy Practice and Biopharmaceutical Sciences, **University of Illinois at Chicago**, January 21, 2008.
79. Gene Expression and Silencing for Improved Islet Transplantation, **14th International Symposium on Recent Advances in Drug Delivery Systems, in Salt Lake City, UT**, February, 2009.
80. Site-Specific Delivery and Targeting of Oligonucleotides and siRNA for treating liver fibrosis, **NBC Meeting**, Toronto, Canada, June 22-25, 2008.
81. Site Specific Delivery and Targeting of Oligonucleotides and siRNA for Treating Liver Diseases, **2nd International Symposium for Intelligent Drug Delivery System, Seoul, Koreas**, May 8-9, 2008.

82. Synthesis and Characterization of Pyridinium cationic lipids for gene delivery. **Seoul National University**, May 7, 2008.
83. Targeted Delivery of Oligonucleotides and siRNA for Treating Liver Diseases, **Singapore National University**, May 6, 2008.
84. Gene Delivery and Silencing for treating Liver Diseases. School of Pharmacy, **Chinese University of Hong Kong**, May 5, 2008.
85. Targeted Delivery of Oligonucleotides and siRNA for Treating Liver Diseases, **Ambion**, Austin, Texas, April 17, 2008.
86. Site Specific Delivery and Targeting of Oligonucleotides and siRNA for Treating Liver Diseases, School of Pharmacy, **University of Minnesota**, Minneapolis, March 27, 2008.
87. Gene Expression and Silencing for Improved Human Islet Transplantation, School of Pharmacy, **University of Kentucky**, Lexington, KY, February 15, 2008.
88. Site Specific Delivery and Targeting of Oligonucleotides and siRNA for Treating Liver Fibrosis and Hepatitis, School of Pharmacy, **University of Manchester, United Kingdom**, October 18, 2007.
89. Site Specific Delivery and Targeting of Oligonucleotides and siRNA for Treating Liver Diseases, **Department of Pharmacy, Ludwig-Maximilians-Universität, Munich, Germany**, October 16, 2007.
90. Delivery and Targeting of Oligonucleotides and siRNA, **Pfizer Global Research & Development, St Louis, MO**, September 27, 2007.
91. Site-specific Delivery of Oligonucleotides and siRNA, **Department of Macromolecular Science, Fudan University, Shanghai, China**, May 31, 2007.
92. Site-specific Delivery and Targeting of Nucleic Acid Drugs for Treating Liver Diseases,
93. **China Pharmaceutical University, Nanjing, China**, May 30, 2007.
94. Site-specific Delivery and Targeting of Oligonucleotides and siRNA for Treating Hepatitis and Liver Fibrosis, **5th Annual Drug Discovery Conference and Expo (IDDST)**, Shanghai, China, May 27-31, 2007.
95. Site-specific Delivery of Nucleic Acids (ODNs and siRNA) for Treating Liver Fibrosis, **University of London School of Pharmacy**, April 26, 2007.
96. ODN (antisense and antigene) and siRNA Delivery and Targeting, **Industry and Health Authority Conference on: Oligonucleotide-based Therapeutics**, Bethesda, MD, April 19-20, 2007.
97. Site-specific Delivery of Oligonucleotides and siRNA for treating Liver Fibrosis,
98. **Endocrinology Grand Round, University of Tennessee** Memphis, January 25, 2007
99. The Role of Scientific Journals on Our Travel to Gene and Nanoworld, **Universidade de Sao Paulo, Brazil**, August 29-31, 2006.
100. Gene Therapy and Gene Silencing in Islet Transplant, Division of Endocrinology,
101. **University of Tennessee Memphis**, August 22, 2006.
102. Site-specific Delivery of Oligonucleotides and siRNA for Treatment of Liver Fibrosis,
103. **Faculty of Pharmaceutical Sciences, Utrecht University, Netherlands**, July 21, 2006
104. Site-specific Delivery of TFO and siRNA for Treatment of Liver Fibrosis, **School of Pharmacy, University of Southern California**, Los Angeles, CA, March 31, 2006.

105. Gene Expression and Silencing for Improved Islet Transplantation, **School of Pharmacy, University of Wisconsin**, WI, September 16, 2005
106. Targeted Delivery of Triplex Forming Oligonucleotides to Hepatic Stellate Cells for Treatment of Liver Fibrosis, **School of Pharmacy, University of Toronto**, Canada, June 2005.
107. Site-specific Delivery of Triplex Forming Oligonucleotides for Treatment of Liver Fibrosis.
108. **School of Pharmacy, University of Arkansas, Little Rock**, AR, April 2005
109. A Travel to Gene and Nanoworld: A seminar to PharmD students, **School of Pharmacy, University of Arkansas, Little Rock**, AR, April 2005
110. Gene Expression and Silencing for Improved Islet Transplantation, **School of Pharmacy, University of Wisconsin**, WI, September 16, 2005.
111. Targeted Delivery of Triplex Forming Oligonucleotides to Hepatic Stellate Cells for Treatment of Liver Fibrosis, **School of Pharmacy, University of Toronto**, Canada, June 2005.
112. Viral and nonviral approaches to growth factor gene delivery, **CRS Workshop, 31st Annual Meeting of the Controlled Release Society, Hawaii**, June 2004.
113. Modulation of gene expression by antisense, antigene and sRNAi, **31st Annual Meeting of the Controlled Release Society, Hawaii**, June 2004.
114. Viral Vector never!! Pearls of Wisdom, **31th Annual Meeting of the Controlled Release Society, Hawaii**, July 2004.
115. Challenges for oligonucleotide delivery. **30th Annual Meeting of the Controlled Release Society, Glasgow, Great Britain**, July 2003.
116. Vascular endothelial growth factor gene delivery to human islets for neoangiogenesis after transplantation, Department of Internal Medicine Endocrinology and Diabetology, **Universitat Sklinikum, Giessen, Germany**, July 15, 2003.
117. Development of novel gene carriers and expression systems for the treatment of diabetes and cancer, Pharmaceutics and Biopharmacy at the **Philipps-University, Marburg, Germany**, July 16, 2003.
118. Development of novel gene delivery systems for the treatment of diabetes and cancer, Department of Biopharmaceutics and Pharmaceutical Technology, **University of Saarland, Saarbrücken, Germany**, July 18, 2003.
119. From bench to business: Tips for academics considering industrial careers, **UT Graduate Research Student Day**, May 2, 2003.
120. Triplex forming Oligonucleotide Delivery, **Enzon, Inc.** in Piscataway, NJ., October 2, 2003
121. Viral and Non-viral Approaches to Human Islet Transplantation. **Department of Allergy and Immunology, University of Tennessee, Memphis**, December 8th, 2003.
122. Functional Polymer and Lipid-based gene delivery for treatment of cancer and diabetes, **School of Biomedical Engineering, University of Tennessee Memphis**, October 4, 2002.
123. Development of gene delivery and expression systems for treatment of cancer and diabetes, **Vascular Biology Center of Excellence, University of Tennessee Memphis**, October, 2002.

124. Gene delivery and expression systems for treatment of cancer and diabetes, **Hepatitis C Group, University of Tennessee Memphis**, September, 2002.
125. Lipopolymeric Gene Delivery for the treatment of diabetes, Department of Materials Science, **University of Tokyo, Japan**, July 15, 2002
126. Nonviral Approaches for Gene Delivery to Human Islets, Division of Stem Cell Regulation Research, **Osaka University**, School of Medicine, **Japan**. July 17, 2002.
127. Development of Synthetic Gene Carriers, Department of Chemistry, College of Natural Sciences, **Seoul National University**, South Korea. July 24, 2002.
128. Polymeric Gene Delivery for the Treatment of Cancer and Diabetes, **University of Nebraska** at Omaha, March 11, 2002.
129. Functional and Biospecific Polymers for Therapeutic Gene Delivery at **AAPS Workshop on Critical Issues in the Design & Applications of Polymeric Biomaterials in Drug Delivery**, Arlington, VA. (February 28 ~ March 1, 2002).
130. Nonviral Gene Delivery, **St. Jude's Children's Hospital**, Memphis, November, 2001.
131. Introduction to Gene Therapy at Sunrise School of Pharmacy Session at the AAPS Annual Meeting (Indianapolis), 2000.
132. Tailor made polymeric gene carriers at the *3rd Congress of Eur Assoc Clin Pharmacol Ther (EACPT)*, **Jerusalem, Israel** (3-8, Oct' 99).

ABSTRACTS (*Speaker)

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2. Mahato RI. Polymeric Nanomedicine of Small Molecules and miRNA for treating Pancreatic Cancer. 2018 China Pharmaceutical Conference, Guangzhou, December 1, 2018.
3. Peng Y, Wen D, Lin F and Mahato RI. Co-delivery of siAlox15 and Sunitinib for Reversing Type I Diabetes in Mice. 5th Annual Biopharmaceutics Research and Development Symposium, September 6-7, 2018.
4. Mahato RI. Bench to Business: How to Step Into the Business World? 5th Annual Biopharmaceutics Research and Development Symposium, September 6-7, 2018.
5. Kumar V, Kumar V, McGuire T, Coulter DW and Mahato RI. Co-delivery of Hedgehog Inhibitor and topotecan to treat medulloblastoma. 5th Annual Biopharmaceutics Research and Development Symposium, September 6-7, 2018.
6. Xin X, Lin F, Wang Qi, Yin L and Mahato RI. Combination Therapy of Small Molecule PLK1 Inhibitor and miRNA to treat Pancreatic Cancer. 5th Annual Biopharmaceutics Research and Development Symposium, September 6-7, 2018.
7. Bhattarai RS, Kumar V, Chaudhary AK and Mahato RI. Therapeutic intervention with miRNA and small molecule HH inhibitor for the management of pancreatic cancer. 5th Annual Biopharmaceutics Research and Development Symposium, September 6-7, 2018.
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10. Kumar V, Chaudhary AK, Dong Y, Zhong HA, Mondal G, Lin F, Kumar V and Mahato RI. Design, synthesis and biological evaluation of potent analgesics of GDC-0449 for the treatment of pancreatic cancer. 4th Annual Biopharmaceutics R & D Symposium, Sep 7-8, 2017
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13. Chaudhary AK, Bhattarai RS, Mondal G, Batra SK and Mahato RI. A therapeutic approach to treat pancreatic cancer using miR-let7b-5p and hedgehog pathway inhibitor. AAPS Annual Meeting and Exhibition, San Diego, CA, November 12-15, 2017.
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15. Lin F, Wen D and Mahato RI. Multi-functional nanocarrier of docetaxel and miRNA-34a modulator for treating prostate cancer. 254th American Chemical Society National Meeting & Expo, Washington DC, August 20-24, 2017.
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17. Chaudhary AK, Kattel K and **Mahato RI** (2016) A therapeutic approach to treat chemoresistant pancreatic cancer using miR-205 and gemcitabine. *AAPS Annual Meeting, Denver, CO*, November 13-17, 2016.
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26. Mondal G, Kumar V and **Mahato RI** (2015) EGFR Targeted Polymeric Mixed Micelles Carrying Gemcitabine for Treating Pancreatic Cancer, *AAPS Annual Meeting, Orlando FL*, October 25-29, 2015.
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37. Wu H and **Mahato RI** (2012) Human Bone Marrow derived Mesenchymal Stem Cells for Improved Human Islet Transplantation. *AAPS Annual Meeting, Chicago, IL*, October 14-18.
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46. Li F, Danquah M and **Mahato RI** (2011) Paclitaxel and Lapatinib loaded Lipopolymer Micelles for Treating Refractory Prostate Cancer. *PharmForum* (Memphis, TN, 2011)
47. Li F, Danquah M and **Mahato RI** (2011) Micelles-based Combination Therapy for Treating Refractory Prostate Cancer *15th International Symposium on Recent Advances in Drug Delivery Systems* (Salt Lake City, UT, 2011)
48. Yang N, Panakanti R and **Mahato RI** (2011) Treatment of Liver Fibrosis by M6P-HPMA-TFO. *15th International Symposium on Recent Advances in Drug Delivery Systems* (Salt Lake City, UT, 2011)
49. Li F, Danquah M and **Mahato RI** (2010) Amphiphilic lipopolymer micelles for drug delivery. *FIP PSWC/AAPS Annual Meeting* (New Orleans, LA)
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Development, Kyoto University, Japan, December 5, 2009.

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63. Cheng G and **Mahato RI** (2008) Caspase-3 Gene Silencing for Improved Islet Transplantation. *11th Annual Meeting of the American Society of Gene Therapy*, Boston, MA (May 28-June 1, 2008)
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128. Thies C, **Mahato RI** and Ravi VN (1993) Ocular drug delivery systems. *Association of International Chemical Engineers Meeting*.
129. **Mahato RI**, Halbert GW, Willmott N and Whateley TL (1992) Preparation of microspheres for intra-articular administration. *Proc Int Symp Control Rel Bioact Mater* **19**: 341-342.
130. **Mahato RI**, Halbert GW and Willmott N (1992) Preparation and characterization of microspherical delivery systems. *ICI Science Link Meeting*, Mereside, England.
131. **Mahato RI**, Willmott N and Vezin WR (1991) Preparative techniques for albumin microspheres. *Proc Int Symp Control Rel Bioact Mater* **18**: 375-376
132. **Mahato RI**, Willmott N and Vezin WR (1991) Preparation and characterization of albumin microspheres. *British Colloid Science Student Meeting*, Nottingham.

ACADEMIC COMMITTEE ASSIGNMENTS:

Graduate Student Committees

PhD Students (Role: Supervisor/Advisor/Chairman of the Advisory Committee)

Students Mentored, Recognitions, and Employment

1. **Ajit S. Narang (2001-2006)**. Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Nonviral and Adenoviral Gene Delivery to Human and Rat Islets. Synthesis of Novel Cationic Lipids for Gene Delivery. Graduated with a PhD in February 2006.
 - Founding Chair, UTHSC AAPS Student Chapter
 - Travel grant by the Controlled Research Society, 2003.
 - Podium Presentation at the Controlled Release Society Annual Meeting, 2005.
 - UTHSC studentship, 2001-2006.
 - His article on the cover page of Pharmacological Reviews.
 - Employment: Research Investigator, Bristol Myers Squibs, Inc., New Jersey (2008-2016) and Genentech (June 2016-Present).
2. **Kun Cheng (2002-2007)**. Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Adenoviral Gene Delivery to Human Islets & Biodistribution and Delivery Systems of Triplex Forming Oligonucleotides for treatment of Liver Fibrosis. Graduated with a PhD in May 2007.
 - Podium Presentation at the AAPS Mid-South Regional Meetings, 2004 and 2006.
 - UTHSC studentship, 2002-2006.
 - Employment: Professor, Department of Pharmaceutical Sciences, University of Missouri Kansas City, MO.
3. **Zhaoyang Ye (2002-2007)**. Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Triplex Forming Oligonucleotide Delivery to Hepatic Stellate Cells. Graduated with a PhD in August 2007.
 - Podium Presentation at the NBC Meeting, Boston, 2006.
 - Co-edited a theme on Cell-based therapeutics for the Advanced Drug Delivery Reviews, 2008.
 - Postdoctoral Fellow, Department of Biomedical Engineering, John Hopkins University, Baltimore, MD.
 - Employment: Associate Professor, The State Key Laboratory of Bioreactor Engineering, East China University of Science and Technology, Shanghai, China.
4. **Lin Zhu (2005-2010)** Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Site-specific Delivery of siRNA for treatment of Hepatitis and Liver Fibrosis. Graduated with a PhD in June 2010. Assistant Professor, Department of Pharmaceutical Sciences, College of Pharmacy, University of Texas A&M Health Science Center, Kingsville, TX.
5. **Ravikiran Panakanti (2005-2010)** Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Viral and Non-viral Gene Therapy for Improving Islet

Transplantation. Currently working as an Associate Professor at Roosevelt University, Chicago, IL

6. **Ningning Yang (2006-2011)** Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Site-specific Delivery of siRNA and Oligonucleotides for treating Liver Fibrosis. Currently working as an Assistant Professor at Manchester College of Pharmacy, Fort Wayne, IN (2011-2015) and LECOM School of Pharmacy, Bradenton, FL (July 2015-Present).
7. **Feng Li (2006-2011)** Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Growth Factor and Antiapoptotic Gene Delivery to Human Pancreatic Islets for treating Type I Diabetes. Currently working as an Assistant Professor at Auburn University.
8. **Michael Kofi Danquah (2007-2012)** Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Polymeric Micelles for Treating Prostate Cancer. Currently working as an Associate Professor at Chicago State University, Chicago, IL
9. **Hao Wu (2008-2013)** Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Genetic Modifications of Human Islets for Improved Islet Transplantation. Currently working as a Seniro Scientist at Novo Nordisk Research Center, Beijing, China
10. **Cheng Tian (2012-May 2013)** Department of Pharmaceutical Sciences, University of Nebraska Medical Center.. Design and Synthesis of Polymers for Drug and siRNA Delivery for treating Liver Fibrosis.
11. **Vaibhav Mundra (2010-2015)** Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Polymeric Nanocarriers for Treatmentt of Melanoma and Genetically Modified Mesenchymal Stem Cells to improve Outcome of Islet Transplantation. Currently working as Assistant Professor, Manchester University, Fort Wayne, IN (Feb 2016-Present)
12. **Virender Kumar (2011-2016)** Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Design and Synthesis of Polymers for Drug and miRNA Delivery. Currently working as a Research Instructor at UNMC.
13. **Di Wen (2011-2017)** Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Delivery of Small Molecule and RNA for the Treatment of Type 1 Diabetes and Prostate Cancer. Currently working as a postdoctoral fellow at the University of California Los Angeles.
14. **Ruinan Yang (2012-2018)** Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Polymeric Nanocarriers Delivering Anticancer Agents for the Treatment of Chemoresistant Prostate Cancer and Lung Metastatic Melanoma. Currently working as a Senior Scientist at PPD Pharmaceuticals, Madison, W.

Postdocs/Visiting Scientists Mentored, Recognitions, and Employment

1. **Amit Kumar Choudhary (May 2015-June 2018)**. He completed his PhD in Life Science and Biochemical Engineering from Soon Moon University, Korea. He worked on various aspects of gene silencing and miRN delivery for treating cancer. He is currently working as Research Scientist, Pfizer Biotechnology, Portage, Michigan.
2. **Dawei Guo (February 2017-January 2018)** He completed his PhD from Southeast University, Nanjing, China is currently working as an Associate Professor. He worked as a visiting scholar on polymeric nanomedicines for treatment of prostate cancer. He was supported by the China Scholarship Council.
3. **Goutam Mondal (2014-2017)**. He completed his PhD in Chemistry from Osmania University, India. He worked on various aspects of drug delivery for treating prostate cancer. He is currently working as Research Associate at the University of Mississippi School of Pharmacy, Oxford, MS.
4. **Geeta Singh (2016 September-August 2017)** She is Assistant Professor in Biomedical Department, Dheenbandu Chhotu Ram University, Murthal, Sonapat, India. She is working on drug delivery for treating cancer. She was a Raman Scholar and funded by the Government of India.
5. **Krishna Kattel (2014-2016)**. He completed his PhD in Nanomaterials Chemistry from Kyungpook National University, Daegu, Republic of Korea. He worked on various aspects of drug delivery and pharmacokinetics for treating cancer. He was funded by Buffett Cancer Center of the University of Nebraska Medical Center Currently working as a Scientist at Pharmaceutics International, inc., Baltimore, MD (August 2016-Present).
6. **Rinku Datta (August 2014-2016)** She completed her PhD in Pharmaceutical Chemistry from North Dakota University. She worked on various aspects of drug delivery and copolymer synthesis for treating liver fibrosis. Currently working as a Research Associate in Dr. Tatiana Bronich's laboratory at UNMC.
7. **Timothy Martin (August 2014-February 2015)**. He completed his PhD in Biomedical Engineering from the University of Nebraska Lincoln. He is working on various aspects of drug delivery for treating prostate cancer. His project was supported by the National Institute of Health.
8. **Deepak Chitkara, Ph.D.** (June 2013- June 2014). He completed his PhD in Pharmaceutics and Drug Delivery at the National Institutes of Pharmaceutical Education and Research (NIPER), Mohali, India. He was a research scholar in our lab at the Department of Pharmaceutical Sciences at UTHSC in 2011. He worked on various aspects of drug delivery for treating pancreatic cancer. He is currently working as an Assistant Professor at Birla Institute of Technology Pilani (BITS-Pilani), India.
9. **Anupama Mittal, Ph.D.** (June 2013- June 2014). She completed his PhD in Pharmaceutics and Drug Delivery at the National Institutes of Pharmaceutical Education and Research (NIPER), Mohali, India. She worked on various aspects of drug delivery for improving the outcome of human islet transplantation and pancreatic cancer. She is currently working as an Assistant Professor at Birla Institute of Technology Pilani (BITS- Pilani), India.

7. **Saurabh Singh, Ph.D.** (February 2011- August 2012). He completed his Doctorate degree in Biochemistry from Aligarh Muslim University, India. He has previously worked at the University of Louisville as a post-doctoral fellow and has experience in molecular toxicology, cell signaling and stem cell biology. Currently working as a Group Leader at Novartis India, Hyderabad, India.
8. **Ravikiran Panakanti, Ph.D.** (October 2010- February 2011). Following his PhD training in our laboratory at UTHSC, he is presently an Assistant Professor at Roosevelt University School of Pharmacy, Chicago, IL.
9. **Wenli Lu, Ph.D. (2009-2010)** Following her PhD training in Pharmaceutics and Drug Delivery at China Pharmaceutical University, she joined the same university as an Assistant Professor in 2006. She is working on genetic modification of human islets for improved islet transplantation. She is currently Postdoctoral fellowship at UTHSC, Memphis.
10. **Guofeng Cheng, Ph.D. (2007-2009)**, Following his PhD training in Molecular Biology from Chinese Academy of Agricultural Sciences, he joined the University of Colorado for a postdoctoral fellowship. He worked on Genetic Modification of Human Islets for Improved Islet Transplantation and construction of adenoviral vectors. Currently, he is working as a Professor at Shanghai Research Center for Animal Biotechnology, Shanghai, China.
11. **Rubi Mahato (2006-2008)** Following her B.Pharm. from India, she joined our laboratory to work as a visiting research assistant on gene delivery to islets. She received her PhD from the University of Missouri Kansas City, MO and is currently working as an Assistant Professor at Fairleigh Dickinson University School of Pharmacy, NJ.
12. **Yong Chen (2006-2007) M.S., M.D.**, Associate Professor and President of Huaian 4th People's Hospital, Huaian, Jiangsu, P.R. China. He is currently working on siRNA Delivery for Treating Hepatitis B.
13. **Xiangxu Jia (2005-2006)**, B.S. degree in Immunology from Chongqing Third Medical University in 1992. Following that, she obtained a M.S. degree in Immunology from Shanghai Second Medical University, in 2003. She worked on Genetic Modifications of Human Islets for Improved Transplantation. Currently she is working at Vanderbilt University, Nashville.
14. **Neeraj Kumar (2002-2003)**, Ph.D. in Organic Chemistry of Indian Institutes of Technology, Roorkee, India on Synthesis and Characterization of Water Soluble Lipopolymer. Currently working as an Assistant Professor, Department of Pharmaceutical Sciences, National Institute of Pharmaceutical Education & Research, SAA Nagar, Mohali 160-062, India.
15. **Dong-an Wang (2001-2002)**, Ph.D. in Polymer Science from Zhejiang University, China on Synthesis and Characterization of Water Soluble Lipopolymer. Currently working as an Associate Professor, Division of Bioengineering, Nanyang Technological University, Singapore.

16. **Suchareeta Mitra (2001-2002)**, Ph.D. in Biochemistry/Zoology from Delhi University on Gene Delivery to Human Islets. Currently working as a postdoctoral fellow at the Department of Molecular Sciences, University of Tennessee Health Science Center, Memphis.

Current PhD Students Continuing (Role: Supervisor; Chairman of the Advisory Committee)

1. **Yang Peng (2013-Present)** Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Stem Cells for improving Human Islet Transplantation.
2. **Saud Almawash (2014- Present)** Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Gene Therapy for treating Cancer. He is funded by Saudi government.
3. **Feng Lin (2014- Present)** Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Design and Synthesis of Novel Polymeric Carriers for Drug and Gene Delivery.
4. **Rajan Sharma Bhattarai (2016-Present)** Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Design and Synthesis of Novel Polymeric Carriers for Anticancer Drug and miRNA Delivery.
5. **Bharti Setthi (2017- Present)** Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Polymeric Nanomedicine for treatment of Medulloblastoma.
6. **Jingyi Ma (2018- Present)** Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Exosomes and miRNA for treatment of type 1 diabetes.

Current Post-doctoral Fellows and Technicians (Role: Supervisor)

1. **Vinod Kumar (2016-Present)** He holds holds PhD in Biochemistry from the Department of Protein Chemistry and Technology, Central Food Technological Research Institute, Mysore, India. He is working various projects on drug and miRNA delivery for treating cancer and liver fibrosis.
2. **Virender Kumar (2016-Present)** He completed his PhD from the Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Currently he is working as a postdoc on the Design and Synthesis of Polymers for Drug and miRNA Delivery. He is funded by Buffett Cancer Center and the NIH.
3. **Jitender Bariwal (Sep 2017-Present)** He completed his PhD in Pharmaceutical Chemistry from Saurashtra University, Rajkot, Gujrat, India and Posdoctoral training from Katholieke Viversiteit, Leuven Belgium. Currently he is working as a visiting scholar on the Design and Synthesis of Polymers for Drug and Nucleic Acid Delivery.
4. **Qiyue Wang (October 2017-Present)** is a visiting student from China Pharmaceutical University, Nanjing and is currently working on drug delivery for the treatment of medulloblastoma. He is funded by a pharmaceutical company.

5. **Xiaofei Xin (November 2017-Present)** is a visiting student from China Pharmaceutical University, Nanjing and is currently working on drug/gene delivery for the treatment of diabetes. She is funded by the China Scholarship Council.

Summer Students and Exchange Students (Role: Supervisor)

1. **Chuhan Zhang** (Nov 2018-December 2018) is a rotating graduate student from the University of Nebraska Medical Center and is currently working on drug delivery for the treatment of diabetes.
2. **Ao Yu** (Nov 2017-January 2018) is a rotating graduate student from the University of Nebraska Medical Center and worked on drug delivery for the treatment of diabetes.
3. **Benjamin K Lundberg (June 2016-July 2016)** was a summer student and is currently a BS student at the University of Nebraska Lincoln. He was partly funded by UNMC College of Pharmacy to work on drug delivery.
4. **Andrea Vincent (June 2016-July 2016)** was a HBCU summer student from Hampton University. She was funded by US Army.
5. **Starr Shands (June 2015-July 2015)** was a HBCU summer student from Hampton University. She was funded by US Army.
6. **Melek Karaca (September 2014-December 2015)** is a doctoral candidate at Istanbul University Faculty of Pharmacy, Turkey. She was funded by Turkey government to work on drug delivery.
7. **Cassie Liu (rotating MD/PhD student) (July 2015-August 2015)** is a MD/PhD candidate at the University of Nebraska Medical Center rotated in our lab.
8. **Leslie Harden (June 2015-July 2015)** was a HBCU summer student from Hampton University. She was funded by US Army.
9. **Duc Ha (June 2015-July 2015)** was a HBCU summer student from Hampton University. He was funded by US Army.
10. **Paige Slavik (Summer student)Melek Karaca (June 2014-August 2014)** was a summer student. She was partly funded by UNMC College of Pharmacy to work on drug delivery.
11. **Paige Slavik (June 2014-August 2014)** was a summer student. She was partly funded by UNMC College of Pharmacy to work on drug delivery.
12. **Noah Bastola (June 2014-August 2014)** was a high school summer student.
13. **Deepak Chitkara (December 2011-2013)** is a doctoral candidate at National Institutes of Pharmaceutical Education and Research (NIPER), Mohali, India. He became a research scholar in our lab at the Department of Pharmaceutical Sciences at UTHSC in 2011. He is working on various aspects of drug delivery for treating pancreatic cancer. He is funded by Kosten Foundation.

14. **Liming Sun (August 2011-August 2012)** is a doctoral candidate in the College of Life Sciences and Technology at Tongji University. He became a research scholar in our lab at the Department of Pharmaceutical Sciences at UTHSC in 2011. He worked on various aspects of drug delivery. He was funded by the Chinese Scholarship Programs.
15. **Jade M. Readus (June-August 2010)** Second year undergraduate student from Tennessee State University, Nashville in my laboratory as a summer student to work on the Interaction of Hedgehog Pathway and MAP-Kinases in Hepatic Stellate Cells.
16. **Hashani Perkins (June-August 2010)** First year medical student from UTHSC worked in my laboratory as a summer student to work on gene delivery to pancreatic β -cells.
17. **Daniel de Paula (February-August 2006)** Visiting graduate student from the Faculty of Pharmaceutical Sciences of Ribeirão Preto at the University of São Paulo in Brazil. Working in my laboratory as a Research Scholar to conduct research on Protein and siRNA Delivery. Postdoctoral Fellow at the University of São Paulo in Brazil. Currently an Assistant Professor at Universidade Estadual do Centro-Oeste - UNICENTRO, PR, Brazil.
18. **Houssam Hajj Houssein (June-July, 2006)**, B.S. student from Delta State University, Cleveland, Mississippi on a project entitled, "Site-specific Delivery of TFO for Treating Liver Fibrosis (100% responsibility). PharmD from the University of Tennessee Health Science Center.
19. **Brandon Kyle Slaughter (June-July, 2005)**, B.S. (Biology) student from the University of Memphis on a project entitled "Genetic Modifications for Improved Islet Transplantation" (100% responsibility)
20. **Margaret M Thomson (June 25~July 18, 2003)** PharmD/PhD student, Department of Pharmaceutical Science, University of Tennessee on a project entitled, "Design and synthesis of cationic lipid and liposome preparation for gene delivery (100% responsibility). Currently a PharmD/PhD student at the University of Tennessee Health Science Center.
21. **Altovise Ewing (June-July 2003)**, B.S. student from Rhodes College, Memphis on a project entitled "Adenovirus-Based hVEGF Gene Delivery to Human Islets" (100% responsibility)
22. **Deependra Mahato (January-July 2002)**, B.S. student from Rhodes College, Memphis on a project entitled "Polymeric Carriers for Gene Delivery"(100% responsibility). Currently a MD student in California.

PhD Committee Member:

1. **Swagat Sharma (2016-Present)** Department of Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Drug Design and Synthesis.
2. **Denise Cobb (2015-Present)** Department of Department of Pharmacology and Experimental Neuroscience, University of Nebraska Medical Center. Polymeric

nanomedicines of antiviral drugs.

3. **Lin Zhiyi** (2014-Present) Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Polymeric nanomedicines of antiviral drugs.
4. **Garima Kaushik** (2014-Present) Department of Biochemistry and Molecular Biology, University of Nebraska Medical Center. Combination therapy for treating pancreatic cancer.
5. **Kruti Soni** (2013-2018) Department of Pharmaceutical Sciences, University of Nebraska Medical Center. Polymeric nanomedicines for cancer treatment.
6. **Dhirender Singh** (2013-2016) Department of Pharmacology and Experimental Neuroscience, University of Nebraska Medical Center. HIV nanomedicines.
7. **Amira Ahmed** (2009-2013) Department of Clinical Pharmacy, University of Tennessee Health Science Center. Cancer Therapy
8. **Chao Huang** (2010-2013) Department of Biomedical Engineering, University of Tennessee Health Science Center. Cancer Therapy
9. **Wararat Limothai** (2008-Present) Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Population Pharmacokinetics.
10. **Chikezie O. Madu** (2007-2012) Department of Pathology and Laboratory Medicines, University of Tennessee Health Science Center. Cancer Gene and Drug Therapy.
11. **Vinayagam Kannan** (2006-2010) Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Drug Delivery and Lyophilization.
12. **Hari Desu (2005-2009)** Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Drug Delivery and Lyophilization.
13. **Murali K. Divi (2004-2007)** Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Targeted Drug Delivery to Glioma Brain Tumors. Currently working in a Pharmaceutical Company.
14. **Krishna Bhandari (2007-2008)** Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Site-specific Delivery of miRNA for treating hepatocellular Carcinoma.
15. **Chad Batson (2003-2005)**. Department of Molecular Sciences, University of Tennessee Health Science Center.
16. **Rauan Sakenov (2010-11)** Department of Pharmaceutical Sciences, University of Tennessee Health Science Center. Bioconjugation for site-specific delivery of siRNA, Oligonucleotides and small molecules for treating liver disorders. Outside PhD Committee Member
17. **Darin Y. Furgeson (2000-2003)**. Department of Pharmaceutics and Pharmaceutical Chemistry, University of Utah. Structural and Functional Effects of Polyethylenimine Gene

Carriers. Currently working as an Assistant Professor, Department of Pharmaceutical Sciences, University of Wisconsin, Madison, WI

18. **Jonathan M. Bennis (1998 - 2001)**. Department of Pharmaceutics and Pharmaceutical Chemistry, University of Utah. Polymeric Gene Carriers. Currently studying law at the University of Utah, Salt Lake City

Outside Examiner (Ph.D. Students)

1. **Doppalapudi Sidhu (2017)** PhD in Pharmaceutical Sciences from the National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad, India under the supervision of Drs Anjali Jain and Wahid Khan. Thesis title: Development and Evaluation of Formulations for Dermatological Disorders
2. **Partha Laskar (2016)** PhD in Chemistry, Indian Institute of Technology (IIT) Kharagpur, India under the supervision of Drs Joykrishna Dey and and Sudip Kumar Ghosh. Thesis title: Self-Assembled Nanostructures of Novel PEG-Based Stimuli-Sensitive Amphiphilic Random Copolymers as Drug Delivery Systems.
3. **Rajan (2011-2016)** PhD in Drug Delivery, CSIR Indian Institute of Chemical Technology, and National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad, India under the supervision of Drs Ramakrishna Sistla and Wahid Khan. Thesis title: Surface Conjugated Nanotherapeutics as Potential Carriers for Targeted Drug Delivery.
4. **Nitin Bharti (2016)** PhD in Pharmaceutics and Drug Delivery, Shoolini University of Biotechnology and Management Sciences, Solan, H.P., India under the supervision of Drs Abhishek Budhiraja and S.L. Harikumar. Thesis title: A Study of Targeted Pulmonary Drug Delivery System containing Nanoparticles.
5. **Santosh Kumar Misra (2007-12)** PhD in Chemistry, Department of Organic Chemistry, Indian Institute of Sciences, Bangalore, India under the supervision of Prof Shantanu Bhattacharya. Thesis title: Synthesis and Characterization of Cationic Lipids and Carbon Nanomaterials based Composites for the Delivery of Bioactive Oligo/polynucleotides and Drugs in vitro and in vivo.
6. **Rohan Rajeev Varshney (2005-2010)**. PhD in Pharmaceutics, School of Chemical and Biomedical Engineering, Nanyang Technological University. TGF- β 3 Mediated Chondrogenic Differentiation of Synovial Mesenchymal Stem Cells in Gene Transferred Co-culture Systems. Graduated in 2010.
7. **Jay Prakash Jain (2005-2010)**. PhD in Pharmaceutics, Department of Pharmaceutics, National Institute of Pharmaceutical Education, India. Amphotericin B-Loaded Polymerosomes as Drug Delivery System: Polymer Synthesis, Formulation Development, in Vitro and in Vivo Evaluation. Graduated in 2010.

8.

Outside Examiner (Promotion and Tenure of Faculty)

1. **Tao Lu Lowe (2018)** Department of Pharmaceutical Sciences, University of Tennessee Health Science Center, Memphis for promotion to professor.
2. **Chalet Tan (2018)** Department of Pharmaceutics and Drug Delivery, University fo

Mississippi, Oxford, MS for tenured Associate Professor.

3. **Won Jong Kim (2017)** Pohang University of Science and Technology, Korea for promotion to professor.
4. **Richard A. Gemeinhart (2016)** Department of Pharmaceutical Sciences, University of Illinois at Chicago
5. **Khawaja Khawaja Ghulam Haider (2015)** King Saud University, Saudi Arabia
6. **Arash Hatefi' (2015)** Department of Pharmaceutics, Rutgers: The State University of New Jersey
7. **Seungpyo Hong (2015)** Department of Pharmaceutical Sciences, University of Illinois at Chicago
8. **Marc Ilies (2014)** Temple University College of Pharmacy
9. **Sung Wan Kim (2014)** Department of Chemistry, Pohan University of Science and Technology (POSTECH), South Korea
10. **Malavosklis (Liz) Bikram (2013)** College of Pharmacy, University of Houston
11. **Shu Wang (2012)** Department of Biological Sciences, National University of Singapore
12. **Chun Wang (2009)** Departments of Pharmaceutics and Bioengineering, University of Minnesota.
13. **Patrick Kiser (2009)** Department of Bioengineering, University of Utah