

## Vivek Gupta, PhD

Associate Professor, Pharmaceutical Sciences  
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### Scientific Keywords

Inhalation; Rare Diseases; Cardiopulmonary Disorders; Pulmonary Arterial Hypertension (PAH); Non-invasive Drug delivery; Drug Repurposing; Mesothelioma; Polymers and Lipid-based Nanocarriers (Nanoparticles).

### APPOINTMENTS

<b>Associate Professor, Pharmaceutical Sciences</b> College of Pharmacy and Health Sciences, St John's University, Queens, NY	<b>07/2021 – Present</b>
<b>Scientific Founder</b> PulmoSIM Therapeutics, San Francisco, CA	<b>08/2020 – Present</b>
<b>Assistant Professor, Pharmaceutical Sciences</b> College of Pharmacy and Health Sciences, St John's University, Queens, NY	<b>09/2016 – 06/2020</b>
<b>Assistant Professor, Biopharmaceutical Sciences</b> School of Pharmacy, Keck Graduate Institute (KGI), Claremont, CA	<b>07/2013 – 08/2016</b>

### POST-DOCTORAL RESEARCH

<b>Post-Doctoral Research Associate</b> Dept. of Chemical Engineering, University of California, Santa Barbara (UCSB), CA <i>Supervisor: Samir Mitragotri, PhD</i>	<b>01/2011 – 06/2013</b>
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### EDUCATION

<b>Ph.D., Pharmaceutical Sciences (Specialization in Pharmaceutics)</b> Texas Tech University Health Sciences Center (TTUHSC), Amarillo, TX <i>Supervisor: Fakhru Ahsan, PhD</i>	<b>2010</b>
<b>B.S. in Pharmaceutical Sciences (B. Pharm)</b> Faculty of Pharmacy, Jamia Hamdard (University), New Delhi, India	<b>2003</b>

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### AWARDS and RECOGNITIONS

- **2021 Faculty Excellence in Student Engagement Award**, St. John's University, Queens, NY

- **2021 Faculty Recognition Award in Research**, St. John's University, Queens, NY
- **2020 Faculty Recognition Award in Research**, St. John's University, Queens, NY
- **2019 Faculty Recognition Award in Research**, St. John's University, Queens, NY
- **2019 Grants Recognition Award**, St. John's University, Queens, NY
- **2018 Faculty Recognition Award in Research**, St. John's University, Queens, NY
- **2017 Faculty Recognition Award in Research**, St. John's University, Queens, NY
- **2013 Excellence in Mentoring Award**, Center for Science and Engineering Partnerships, CNSI, University of California Santa Barbara (UCSB) for mentorship of undergraduate students.
- **2012 Otis Williams Postdoctoral Fellowship in Bioengineering**, sponsored by Santa Barbara Foundation through College of Letters and Science, UCSB. Annual Award: \$70,424.
- **2011 Outstanding Graduate Student Award**, Graduate School of Biomedical Sciences Convocation, Texas Tech University Health Sciences Center, Lubbock, TX.
- **Travel Award – AAPS Executive Council**, 2010 FIP PSWC/AAPS Annual Meeting and Exposition.
- **2<sup>nd</sup> Prize – Graduate Students' Poster Competition 2009** organized by Texas Tech-AAPS Student Chapter at AAPS Annual Meeting, Los Angeles, CA.
- **2009 GSAA Student of the Year** – Graduate Students' Association at Amarillo (GSAA) at SOP, TTUHSC.
- GSAA Travel Scholarship 2008, 2009, 2010

### **PATENT DISCLOSURES, PUBLICATIONS, and PRESENTATIONS**

#### **Patent Applications/Invention Disclosures:**

1. **Gupta V.** Compositions and Methods for Treating Pulmonary Fibrosis. *Provisional Patent filed November 18, 2020. Application # 63/115,106*
2. **Gupta V.** Compositions and Methods for Treating or Preventing Pulmonary Hypertension. *Provisional Patent filed September 11, 2020. Application # 63/077,102*
3. **Gupta V,** Goyal M. Formulations for Oral Delivery of Polypeptides. (*Provisional Patent filed April 15, 2020 by ProdigY Biotech*). *Application # 63/010,224*
4. Whitehead K, Karr N, Arora A, Mitragotri S, **Gupta V.** Improved Oral Drug Devices and Drug Formulations. University of California Santa Barbara (UCSB) (*US Pat. App. US20130274352 A1*).

#### **PEER REVIEWED ARTICLES AND BOOK CHAPTERS:**

**Published (h-index – 29; Citations – 2,943)**

#### **PubMed Bibliography**

#### **Peer-reviewed Publications:**

#### **St. John's University (SJU) Affiliation:**

1. Parvathaneni V, Shukla SK, Kulkarni NS, **Gupta V\*** (2021). Development and Characterization of Inhalable Transferrin Functionalized Amodiaquine Nanoparticles – Efficacy in Non-small Cell Lung Cancer (NSCLC) Treatment. *International Journal of Pharmaceutics (Accepted August 20, 2021)*.

2. Shukla SK, Sarode A, Kanabar DD, Muth A, Kunda NK, Mitragotri S, **Gupta V\*** (2021). Bioinspired Particle Engineering for Non-invasive Drug Delivery to the Lungs. **Materials Science & Engineering C (Accepted July 12, 2021)**.
3. Parvathaneni V, Elbatanony R, Goyal M, Chavan T, Vega N, Kolluru S, Muth A, **Gupta V\***, Kunda NK\* (2021). Repurposing Bedaquiline for Effective Non-small Cell Lung Cancer (NSCLC) Therapy as Inhalable Cyclodextrin-based Molecular Inclusion Complexes. **International Journal of Molecular Sciences (Accepted April 27, 2021)**.
4. Kulkarni NS, Vaidya B, **Gupta V\*** (2021). Nano-synergistic Combination of Erlotinib and Quinacrine for Non-Small Cell Lung Cancer (NSCLC) Therapeutics – Evaluation in Biologically Relevant *In-vitro* Models. **Materials Science and Engineering C** 121:Feb 2021:111891.
5. Parvathaneni V, Elbatanony R, Shukla SK, Kulkarni NS, Kanabar DD, Chauhan G, Ayehunie S, Chen ZS, Muth A, **Gupta V\*** (2020). Bypassing P-glycoprotein Mediated Efflux of Afatinib by Cyclodextrin Complexation – Evaluation of Intestinal Absorption and Anti-Cancer Activity. **Journal of Molecular Liquids (Available online November 25, 2020)**.
6. Parvathaneni V, Kulkarni NS, Muth A, Kunda NK, **Gupta V\*** (2020). Therapeutic Potential of Inhalable Medications to Combat COVID-19. **Therapeutic Delivery (Invited Commentary) (Available online November 17, 2020)**.
7. Sawant SS, Patil SM, **Gupta V**, Kunda NK (2020). Microbes as Medicines: Harnessing the Power of Bacterial in Advancing Cancer Treatment. **International Journal of Molecular Sciences** 21(20):7575.
8. Kulkarni NS, Vaidya B, Parvathaneni V, Bhanja D, **Gupta V\*** (2020). Repurposing Quinacrine for Treatment of Malignant Mesothelioma – In-vitro Therapeutic and Mechanistic Evaluation. **International Journal of Molecular Sciences** 21(17):E6306.
9. Parvathaneni V, **Gupta V\*** (2020). Utilizing Drug Repurposing against COVID-19 – Efficacy, Limitations and Challenges. **Life Sciences** 259:118275.
10. Chauhan G, Shaik AA, Kulkarni NS, **Gupta V\*** (2020). The Preparation of Lipid-Based Drug Delivery Systems using Melt Extrusion. **Drug Discovery Today** S1359-6446(20)30330-5.
11. Shukla SK, Chan A, Parvathaneni V, Kanabar DD, Patel K, Ayehunie S, Muth A, **Gupta V\*** (2020). Enhanced Solubility, Stability, Permeation and Anti-Cancer Efficacy of Celastrol- $\beta$ -Cyclodextrin Inclusion complex. **Journal of Molecular Liquids** 318:113936.
12. Wang X, Parvathaneni V, Shukla SK, Kulkarni NS, Muth A, Kunda NK, **Gupta V\*** (2020). Inhalable Resveratrol-Cyclodextrin Complex Loaded Biodegradable Nanoparticles for Enhanced Efficacy against Non-Small Cell Lung Cancer. **International Journal of Biological Macromolecules** 164:638-650.
13. Kanabar DD, Farrales P, Kabir A, Juang D, Gnanmony M, Almasri J, Torrents N, Shukla SK, **Gupta V**, Dukhande VV, D'Souza A, Muth A (2020). Optimizing the Aryl-triazole of cjoc42 for Enhanced Gankyrin Binding and Anti-Cancer Activity. **Bioorganic and Medicinal Chemistry Letters** 30(17):127372.
14. Wang X, Parvathaneni V, Shukla SK, Kanabar DD, Muth A, **Gupta V\*** (2020). Cyclodextrin Complexation for Enhanced Stability and Non-invasive Pulmonary Delivery of Resveratrol – Applications in Non-Small Cell Lung Cancer Treatment. **AAPS PharmSciTech** 21(5):183.

15. Elbatanony R, Parvathaneni V, Kulkarni NS, Shukla SK, Chauhan G, Kunda NK, **Gupta V\*** (2020). Afatinib-loaded Inhalable PLGA Nanoparticles for Localized Therapy of Non-Small Cell Lung Cancer (NSCLC) – Development and In-vitro Efficacy. *Drug Delivery and Translational Research* (Available online June 16, 2020).
16. Parvathaneni V, Goyal M, Kulkarni NS, Shukla SK, **Gupta V\*** (2020). Nanotechnology Based Repositioning of an Anti-Viral Drug for Non-Small Cell Lung Cancer (NSCLC). *Pharmaceutical Research* 37(7):123.
17. Parvathaneni V, Kulkarni NS, Chauhan G, Shukla SK, Elbatanony R, Patel BI, Kunda NK, Muth A, **Gupta V\*** (2020). Development of Pharmaceutically Scalable Inhaled Anti-cancer Nanotherapy – Repurposing Amodiaquine for Non-Small Cell Lung Cancer (NSCLC). *Materials Science and Engineering C* 115:111139.
18. Shukla SK, Chan A, Parvathaneni V, **Gupta V\*** (2020). Metformin-loaded Chitosomes for Treatment of Malignant Pleural Mesothelioma – A Rare Thoracic Cancer. *International Journal of Biological Macromolecules* 160:128-141.
19. Parvathaneni V, Kulkarni NS, Shukla SK, Farrales PT, Kunda NK, Muth A, **Gupta V\*** (2020). Systemic Development and Optimization of Inhalable Pirfenidone Liposomes for Non-Small Cell Lung Cancer Treatment. *Pharmaceutics* 12(3):206.
20. Shukla SK, Kulkarni NS, Farrales P, Kanabar DD, Parvathaneni V, Kunda NK, Muth A, **Gupta V\*** (2020). Sorafenib Loaded Inhalable Polymeric Nanoparticles against Non-Small Cell Lung Cancer. *Pharmaceutical Research* 37(3):67.
21. Shukla SK, Kadry H, Bhatt J, Elbatanony R, Ahsan F, **Gupta V\*** (2020). Statistical Optimization and Validation of a Novel UPLC Method for Estimation of Nintedanib in Rat and Human Plasma. *Bioanalysis* 12(3):159-174.
22. Shukla SK, **Gupta V\*** (2020). Existing Challenges in Bioanalysis of Therapeutic Proteins. *Bioanalysis (Editorial)* 12(4):207-209.
23. Vaidya B, Kulkarni NS, Shukla SK, Parvathaneni V, Chauhan G, Damon JK, Sarode A, Garcia JV, Kunda NK, Mitragotri S, **Gupta V\*** (2020). Development of Inhalable Quinacrine Loaded Bovine Serum Albumin Modified Cationic Nanoparticles: Repurposing Quinacrine for Lung Cancer Therapeutics. *International Journal of Pharmaceutics* 577(2020):118995.
24. Shukla SK, **Gupta V\*** (2020). Utilizing Nanotechnology to Recuperate Sorafenib for Lung Cancer Treatment – Challenges and Future Perspective. *Therapeutic Delivery (Editorial)* 11(4):213-215.
25. Shukla SK, Kulkarni NS, Chan A, Parvathaneni V, Farrales P, Muth A, **Gupta V\*** (2019). Metformin Encapsulated Liposome Delivery System: An Effective Treatment Approach Against Breast Cancer. *Pharmaceutics* 11(11):559.
26. Parvathaneni V, Kulkarni NS, Muth A, **Gupta V\*** (2019). Drug Repurposing: A Promising Tool to Accelerate the Drug Discovery Process. *Drug Discovery Today* 24(10):2076-2085.
27. Kulkarni NS, Parvathaneni V, Shukla SK, Barasa L, Perron JC, Yoganathan S, Muth A, **Gupta V\*** (2019). Tyrosine Kinase Inhibitor Conjugated Quantum Dots for Non-Small Cell Lung Cancer (NSCLC) Treatment. *European Journal of Pharmaceutical Sciences* 133:145-159.
28. Kulkarni NS, Guererro Y, Gupta N, Muth A, **Gupta V\*** (2019). Exploring Potential of Quantum Dots as Dual Modality for Cancer Therapy and Diagnosis. *Journal of Drug Delivery Science and Technology* 49:352-364.

29. Vaidya B, Parvathaneni V, Kulkarni NS, Shukla SK, Damon JK, Sarode A, Kanabar D, Garcia JV, Mitragotri S, Muth A, **Gupta V\*** (2018). Cyclodextrin Modified Erlotinib Loaded PLGA Nanoparticles for Improved Therapeutic Efficacy Against Non-Small Cell Lung Cancer. *International Journal of Biological Macromolecules* 122:338-347.
30. Vaidya B, Shukla SK, Kolluru S, Huen M, Mulla N, Mehra N, Kanabar D, Palakurthi S, Ayehunie S, Muth A, **Gupta V\*** (2018). Nintedanib-cyclodextrin Complex to Improve Bioactivity and Intestinal Permeability. *Carbohydrate Polymers* 204:68-77.
31. Solomon D, Gupta N, Mulla NS, Shukla SK, Guerrero Y, **Gupta V\*** (2017). Role of In-vitro Release Methods in Liposomal Formulation Development: Challenges and Regulatory Perspective. *The AAPS Journal* 19(6):1669-1681.
32. Vaidya B, Patel R, Muth A, **Gupta V\*** (2017). Exploitation of Novel Molecular Targets to Treat Idiopathic Pulmonary Fibrosis: A Drug Discovery Perspective. *Current Medicinal Chemistry* 24(22):2439-2458.
33. Vaidya B, Pangallo M, Ruffenach G, Cunningham CM, Perron JC, Kolluru S, Eghbali E, **Gupta V\*** (2017). Advances in the Treatment of Pulmonary Hypertension: A Patent Review. *Expert Opinion on Therapeutic Patents* 27(8):907-918.
34. Wibroe PP, Anselmo AC, Nilsson PH, Sarode A, **Gupta V**, Urbanics R, Szebeni J, Hunter AC, Mitragotri S, Mollnes TE, Moghimi SE (2017). Bypassing Polymeric Nanoparticle-mediated Adverse Injection Reactions through Particle Shape Control and Erythrocyte 'Hitch-hiking'. *Nature Nanotechnology* 12(6):589-594.
35. Magee J, Gochi A, **Gupta V\*** (2016). Multiple Pathway Modulating Therapy for Pulmonary Hypertension: A Survey of Practice Patterns and Perceptions. *Chest* 150(4), Supplement:1186A.

#### **Prior to St. John's:**

36. Gupta N, Liu JR, Patel BK, Solomon D, Vaidya B, **Gupta V\*** (2016). Microfluidics-based 3D Cell Culture Models: Utility in Novel Drug Discovery and Delivery Research. *Bioengineering and Translational Medicine (invited theme review for the inaugural Nanomedicine Issue)* 1:63-81.
37. Pan D, Vargas-Morales O, Zern B, Anselmo AC, **Gupta V**, Zakrewsky M, Mitragotri S, Muzykantov V (2016). The effect of Polymeric Nanoparticles on Biocompatibility of Carrier Red Blood Cells. *PLoS One* 11(3):e0152074.
38. **Gupta V**, Hwang BH, Doshi N, Banerjee A, Anselmo AC, Mitragotri S (2016). Delivery of Exenatide and Insulin using Mucoadhesive Intestinal Devices. *Annals of Biomedical Engineering* 44(6):1993-2007.
39. Zilbermintz L, Leonardi W, Jeong SY, Sjodt M, McComb R, Ho CL, Retterer C, Gharaibeh D, Zamani R, Soloveva V, Bavari S, Levitin A, West J, Bradley KA, Clubb RT, Cohen S, **Gupta V**, Martchenko M (2015). Identification of agents effective against multiple toxins and viruses by host-oriented cell targeting. *Nature Scientific Reports* 5:13476.
40. Anselmo AC, Kumar S, **Gupta V**, Pearce AM, Ragusa A, Muzykantov V, Mitragotri S (2015). Exploiting Shape, Cellular-Hitchhiking and Antibodies to Target Nanoparticles to Lung Endothelium: Synergy between Physical, Chemical and Biological Approaches. *Biomaterials* 68:1-8.
41. Vaidya B, **Gupta V\*** (2015). Novel Therapeutic Approaches for Pulmonary Arterial Hypertension: Unique Molecular Targets to Site-specific Drug Delivery. *Journal of Controlled Release* 211:118-33.

42. Kumar L, Verma S, Vaidya B\*, **Gupta V\*** (2015). Exosomes: Natural Carriers for siRNA Delivery. **Current Pharmaceutical Design** 21(31):4556-65.
43. Chen M, Kumar S, Anselmo AC, **Gupta V**, Slee DH, Muraski JA, Mitragotri S (2015). Topical Delivery of Cyclosporin A into Skin using SPACE-peptide. **Journal of Controlled Release** 199:190-197.
44. Anselmo AC, Gilbert JB, Kumar S, **Gupta V**, Cohen RE, Rubner MF, Mitragotri S (2015). Monocyte-Mediated Delivery of Polymeric Backpacks to Inflamed Tissues: A Generalized Strategy to Deliver Drugs to Treat Inflammation. **Journal of Controlled Release** 199:29-36.
45. Vaidya B, **Gupta V\*** (2015). Novel therapeutic strategies for cardiovascular disease treatment: From molecular level to nanotechnology. **Current Pharmaceutical Design (Editorial, Theme issue on therapeutic strategies for cardiovascular disease treatment)** 21(30):4367-9.
46. Chen M, Zekrewsky M, **Gupta V**, Anselmo AC, Muraski JA, Mitragotri S (2014). Topical Delivery of siRNA into Skin using SPACE-peptide Carriers. **Journal of Controlled Release** 179:33-41.
47. Anselmo AC, **Gupta V**, Zern B, Pan D, Muzykantov V, Mitragotri S (2013). Delivering Nanoparticles to Lungs While Avoiding Liver and Spleen through Adsorption on Red Blood Cells. **ACS Nano** 7(12):11129-37.
48. Chen M, **Gupta V**, Anselmo AC, Muraski JA, Mitragotri S (2013) Topical Delivery of Hyaluronic Acid into Skin using SPACE-peptide Carriers. **Journal of Controlled Release** 173:67-74.
49. **Gupta V**, Hwang BH, Lee J, Anselmo AC, Doshi N, Mitragotri S (2013). Mucoadhesive Intestinal Devices for Oral Delivery of Salmon Calcitonin. **Journal of Controlled Release** 172(3):753-762.
50. Nahar K, Gupta N, Gauvin R, Absar S, Patel BI, **Gupta V**, Khademhosseini A, Ahsan F (2013). *In Vitro*, *In Vivo* and *Ex Vivo* Models for Studying Particle Deposition and Drug Absorption of Inhaled Pharmaceuticals. **European Journal of Pharmaceutical Sciences** 49(5):805-818.
51. Kolhar P, Anselmo AC, **Gupta V**, Pant K, Prabhakarparandian B, Ruoslahti E, Mitragotri S (2013) Using Shape Effects to Target Nanoparticles to Lung and Brain Endothelium. **Proceedings of the National Academy of Sciences, USA (PNAS)** 110(26):10753-8.
52. **Gupta V**, Hwang BH, Doshi N, Mitragotri S (2013) A Permeation Enhancer for Increasing Transport of Therapeutic Macromolecules across the Intestine. **Journal of Controlled Release** 172(2):541-549.
53. **Gupta V**, Gupta N, Shaik IH, Mehvar R, Nozik-Grayck E, Mcurtry IF, Oka M, Komatsu M, Ahsan F (2013) Inhaled PLGA Particles of Prostaglandin E<sub>1</sub> Ameliorate Symptoms and Progression of Pulmonary Hypertension at a Reduced Dosing Frequency. **Molecular Pharmaceutics**, 10(5):1655-67.
54. **Gupta V**, Gupta N, Shaik IH, Mehvar R, Mcurtry IF, Oka M, Nozik-Grayck E, Komatsu M, Ahsan F (2013) Liposomal Fasudil, a Rho-Kinase Inhibitor, for Prolonged Pulmonary Preferential Vasodilation in Pulmonary Arterial Hypertension. **Journal of Controlled Release**, 167(2):189-99.
55. **Gupta V**, Doshi N, Mitragotri S (2013) Permeation of Insulin, Calcitonin and Exenatide across Caco-2 Monolayers: Measurement using a Rapid, 3-Day System. **PLOS One**, 8(2):e57136.
56. Patel BI, Gauvin R, Absar S, **Gupta V**, Gupta N, Nahar K, Khademhosseini A, Ahsan F (2012) Computational and Bio-engineered Lungs as Alternatives to Whole Animal, Isolated Organ and Cell-Based Lung Models. **American Journal of Physiology – Lung Cellular and Molecular Physiology**, 303(9):L733-47.

57. Patel B, **Gupta V**, Ahsan F (2012) PEG-PLGA Based Large Porous Particles for Pulmonary Delivery of a Highly Soluble Drug, Low Molecular Weight Heparin. *Journal of Controlled Release*, 162(2):310-20.
58. **Gupta V**, Ahsan F (2011) Influence of PEI as a Core Modifying Agent on PLGA Microspheres of PGE<sub>1</sub>, A Pulmonary Selective Vasodilator. *International Journal of Pharmaceutics*, 413(1-2):51-62.
59. **Gupta V**, Davis M, Hope-Weeks LJ, Ahsan F (2011) PLGA Microparticles Encapsulating Prostaglandin E<sub>1</sub>-Hydroxypropyl- $\beta$ -cyclodextrin (PGE<sub>1</sub>-HP $\beta$ CD) Complex for the Treatment of Pulmonary Arterial Hypertension (PAH). *Pharmaceutical Research*, 28(7):1733-49.
60. **Gupta V**, Ahsan F (2010) Inhalational Therapy for Pulmonary Arterial Hypertension: Current Status and Future Prospects. *Critical Reviews™ in Therapeutic Drug Carrier Systems*, 27(4):313-70.
61. **Gupta V**, Rawat A, Ahsan F (2010) Feasibility Study of Aerosolized Prostaglandin E<sub>1</sub> Microspheres as a Non-Invasive Therapy for Pulmonary Arterial Hypertension. *Journal of Pharmaceutical Sciences*, 99(4):1774-89.
62. Thomas C, **Gupta V**, Ahsan F (2010). Particle Size Influences the Immune Response Produced by Hepatitis B Vaccine Formulated in Inhalable Particles. *Pharmaceutical Research*. 27(5):905-19.
63. Bai S, **Gupta V**, Ahsan F (2010) Inhalable Lactose-based Dry Powder Formulations of Low Molecular Weight Heparin. *Journal of Aerosol Medicine and Pulmonary Drug Delivery*, 23(2):97-104.
64. Bai S, **Gupta V**, Ahsan F (2009) Cationic Liposomes as Carriers for Aerosolized Formulations of an Anionic Drug: Safety and Efficacy Study. *European Journal of Pharmaceutical Sciences*, 38(2):165-73.
65. Thomas C, **Gupta V**, Ahsan F (2009) Influence of Surface Charge of PLGA Particles of Recombinant Hepatitis B Surface Antigen in Enhancing Systemic and Mucosal Immune Responses. *International Journal of Pharmaceutics*, 379(1):41-50.

#### Book Chapters:

66. Goyal M, Parvathaneni V, **Gupta V\*** (2021). Approaches for Drug Delivery to the Mitochondria – Current Status and Future Trends. *Multifunctional Nanocarriers* (Eds. Mehra, Srivastava, Madan and Singh): Elsevier, LLC (*In Press*).
67. Wang X, Shukla SK, **Gupta V\*** (2021). Recent Advances in Dendrimer-based Nanocarriers. *Multifunctional Nanocarriers* (Eds. Mehra, Srivastava, Madan and Singh): Elsevier, LLC (*In Press*).
68. Kulkarni NS, Shukla SK, **Gupta V\*** (2021). Relative Distribution of P-glycoprotein (P-gp) and its Pharmacological Relevance. *An Introduction to P-Glycoproteins* (Eds. Rahul Dev Jayant, and Wahajuddin): Nova Science Publishers, Hauppauge, NY, USA.
69. Parvathaneni V, **Gupta V\*** (2020). Evaluation of 3D Cell Culture Models for Efficacy Determination of Anticancer Nanotherapeutics. *Drug Delivery with Targeted Nanoparticles: in-vitro and in-vivo Evaluation Methods* (eds. Yilmaz Capan, Hayrettin Tonbul, and Adem Sahin): Panstanford Publishing.
70. Parvathaneni V, Kulkarni NS, **Gupta V\*** (2020). Current Status and Perspectives in Mucosal Drug Delivery of Nanotherapeutic Systems. *Mucosal Delivery of Drugs and Biologics in Nanoparticles in AAPS Advances in Pharmaceutical Sciences* (eds. Nitesh Kunda and Pavan Muttill); Springer International Publishing AG.

71. Parvathaneni V, Shukla S, **Gupta V\*** (2018). Emerging Therapeutic Targets and Therapies in Idiopathic Pulmonary Fibrosis. ***Fibrosis in Disease – An Organ-Based Guide to Disease Pathophysiology and Therapeutic Considerations*** (eds. Monte Willis, Jonathan C Schisler and Cecelia C Yates-Binder); Springer Nature Books, Switzerland AG.
72. Kumar L, Verma S, Vaidya B, **Gupta V\*** (2017). Bioadhesive Polymers for Targeted Drug Delivery. ***Nanotechnology Based Approaches for Targeting and Delivery of Drugs and Genes*** (eds. Vijay Mishra, Prashant Kesharwani, Mohd Cairul, Mohd Amin, Arun Iyer). Elsevier, LLC.
73. Vaidya B, Shah S, **Gupta V\*** (2015). Drug delivery to mitochondria: Promising approach for the treatment of liver disease. ***Mitochondria in Liver Disease*** (Eds. Derick Han and Neil Kaplowitz); Taylor and Francis, LLC, New York, NY.
74. **Gupta V**, Thomas C, Ahsan F (2010) Principles and Practice of Pulmonary Drug Delivery. In ***Targeted Delivery of Small and Macromolecular Drugs: Problems Faced and Approaches Taken*** (Eds. Narang AS and Mahato RI); Taylor and Francis, LLC, New York, NY.

#### **Non-Peer Reviewed Contributions:**

75. Sarvepalli S, Parvathaneni V, **Gupta V\*** (2021). Inhalation of Repurposed Drugs: A Promising Strategy in PAH Treatment. ***Inhalation Magazine. February 2021.***
76. Chauhan G, **Gupta V\*** (2020). Continuous Manufacturing of Lipid-Based Delivery Systems using Melt Extrusion. ***Pharma Focus Asia. Issue 41***
77. Chauhan G, **Gupta V\*** (2019). Development and Challenges: Adapting Continuous Manufacturing for Pharmaceuticals. ***AAPS Newsmagazine Cover Story, April 2019.***
78. **Gupta V\*** (2015). Inhaled Antibiotics for Multi-Drug Resistant Cystic Fibrosis – Current Therapies, Limitations, and Opportunities. ***INTFG Newsletter, Summer 2015.***
79. Gupta N, **Gupta V**, Ahsan F (2011). Aerosolized Nanoparticles of Anti-PAH Drug, Fasudil. ***INTFG Newsletter, October 2011.***

\*Corresponding author

#### **ORAL PRESENTATIONS:**

1. **Gupta V**. Novel Therapeutics for Idiopathic Pulmonary Fibrosis – A Repurposing Approach. ***Rapid Fire Talk, AAPS PharmSci360 Annual Meeting.*** October 2021.
2. **Gupta V**. Achieving Dichotomous Goals for Drug Delivery – Challenges with Scalability and Target Specificity. ***In-person Prologue Lecture, AAPS PharmSci360 Annual Meeting.*** October 2021.
3. **Gupta V**. Achieving Dichotomous Goals for Drug Delivery – Challenges with Scalability and Target Specificity. ***On-Demand Prologue Lecture, AAPS PharmSci360 Annual Meeting.*** October 2021.
4. **Gupta V**. Scalable Targeting – Simplicity is the Key. ***Division of Molecular Pharmaceuticals and Drug Delivery (MPDD) Annual Seminar Series, The University of Texas at Austin.*** September 2021.
5. **Gupta V**. Inhaled Lipid Nanoparticles. ***Global Conference for Lipid Nanoparticles and Other Non-Viral Nanocarriers.*** August 2021.
6. **Gupta V**. Research in a COVID Environment – Roundtable. ***2021 St. John's University Research Month.*** April 2021.
7. **Gupta V**. Scalable Nano-Repurposing Strategies for Enhanced Efficacy against New Indications. ***NJPhAST Monthly Meetings.*** March 2021.



8. **Gupta V.** Scalable Nano-Repurposing Strategies for Enhanced Efficacy against New Indications. *VAIBHAV (Global Summit of Overseas and Resident Indian Scientists and Academicians)*. October 2020.
9. **Gupta V.** Developing a Fundable Research Proposal - Insights from a Teaching-focused Institution. *Chicago State University College of Pharmacy*. October 2020.

**PUBLISHED ABSTRACTS (National/International Conferences Only):**

1. Chauhan G, Shaik AA, Sawant SS, Kunda NK, **Gupta V\***. Continuous Production of Nebulized Antibiotic Formulation for Treatment of Pseudomonas Aeruginosa Infections in Cystic Fibrosis. *2021 Respiratory Drug Delivery (RDD) Annual Meeting*, May 2021 (Virtual).
2. Shukla SK, **Gupta V\***. Bioinspired Particle Engineering for Non-invasive Drug Delivery to the Lungs – Influence of Particle Shape. *2021 Respiratory Drug Delivery (RDD) Annual Meeting*, May 2021 (Virtual).
3. Parvathaneni V, Elbatany RS, Chavan T, Vega N, Kolluru S, Muth A, **Gupta V\***, Kunda NK\*. Repurposing Bedaquiline by Inhalation for Non-small Cell Lung Cancer. *Respiratory Drug Delivery (RDD) Annual Meeting*, May 2021 (Virtual).
4. Nguyen V, Shukla SK, **Gupta V\***. Cationically modified niosomes for pulmonary delivery of nintedanib: enhancing therapeutic efficacy against non-small cell lung cancer. *ASHP Midyear Clinical Meeting*, December 2019, Las Vegas, NV.
5. Parvathaneni V, **Gupta V\***. Repurposing an Antimalarial Drug for Efficacy in Diverse Breast Cancer Subtypes. *AAPS Annual Meeting*, November 2019, San Antonio, TX (**WINNER OF THE AAPS PHARMSCI360 BEST ABSTRACT AWARD**).
6. Parvathaneni V, Kulkarni N, Shukla SK, Farrales P, Muth A, **Gupta V\***. Systematic Development and Optimization of Pirfenidone Liposomes for Non-Small Cell Lung Cancer Treatment. *AAPS Annual Meeting*, November 2019, San Antonio, TX.
7. Elbatany R, Shukla SK, Parvathaneni V, **Gupta V\***. Formulation and Evaluation of Afatinib Loaded PLGA Nanoparticles for metastatic Non-Small Cell Lung Cancer. *AAPS Annual Meeting*, November 2019, TX.
8. Elbatany R, **Gupta V\***, Kunda N\*. Bedaquiline-Cyclodextrin Molecular Inclusion Complex for Effective Treatment of Multidrug-resistant Tuberculosis. *AAPS Annual Meeting*, November 2019, TX.
9. Shukla SK, **Gupta V\***. Development and Evaluation of Sorafenib-Loaded Nanoparticles as Inhalable Drug Delivery Carriers for Treatment of Non-Small Cell Lung Cancer. *AAPS Annual Meeting*, November 2019, San Antonio, TX.
10. Baig NF, Reznik SE, Muth A, **Gupta V\***. Chelerythrine Chloride Nanoparticles in Triple Negative Breast Cancer Chemotherapy. *AAPS Annual Meeting*, November 2019, TX.
11. Kulkarni N, Vaidya B, **Gupta V\***. Biodegradable Nanoparticle-Based Synergistic Combination of Erlotinib and Quinacrine for Advanced Non-Small Cell Lung Cancer Therapeutics. *17th NanoDDS Annual Conference*, September 2019, Cambridge, MA.
12. Shukla SK, **Gupta V\***. Metformin Encapsulated in Biopolymer Coated Liposomes: Repurposing Antidiabetic Drug for Treatment of Malignant Mesothelioma. *Controlled Release Society (CRS) Annual Meeting*, July 2019, Valencia, Spain.
13. Parvathaneni V, Goyal M, **Gupta V\***. Nanotechnology Based Repurposing of an Anti-viral Drug for Non-small Cell Lung Cancer (NSCLC). *American Thoracic Society (ATS) Annual Meeting*, May 2019, Dallas, TX (**WINNER OF ATS SCHOLAR AWARD**).

14. Wang X, Parvathaneni V, Shukla SK, Kulkarni NS, **Gupta V\***. Encapsulation of Resveratrol-Cyclodextrin Complex Loaded Nanoparticles for Enhanced Anticancer Effects on Non-Small Cell Lung Cancer Cell Lines. *AAPS Annual Meeting, November 2018, Washington, DC.*
15. Parvathaneni V, **Gupta V\***. High Pressure Homogenization as a Potential Approach to Formulate Amodiaquine Nanoparticles and Exploring their Efficacy in Non-Small Cell Lung Cancer. *AAPS Annual Meeting, November 2018, Washington, DC.*
16. Rakib-Uddin M, Parvathaneni V, **Gupta V\***. Formulation of Tadalafil Loaded PLGA Nanoparticles for Non-Invasive Pulmonary Delivery. *AAPS Annual Meeting, November 2018, Washington, DC.*
17. Shukla SK, Chan A, **Gupta V\***. Lipid Encapsulated Metformin as an Emerging Potential Drug Delivery System for Breast Cancer Treatment. *AAPS Annual Meeting, November 2018, Washington, DC.*
18. Kulkarni NS, Vaidya B, Bhanja D, **Gupta V\***. Repurposing an Anti-Malarial drug for Treatment of Malignant Mesothelioma. *AAPS Annual Meeting, November 2018, Washington, DC.*
19. Chauhan G, Shaik AA, Shukla SK, **Gupta V\***. Development of Solid Lipid Nanoparticles using Hot Melt Extrusion for Pulmonary Delivery of Water Insoluble Drugs. *AAPS Annual Meeting, November 2018, Washington, DC.*
20. Albern J, Lyon L, Desai D, Solomon D, **Gupta V**, Mulla N, Gupta N. A microfluidic platform for rapid production of scalable, tunable, and controlled lipid nanoparticles. *AAPS Annual Meeting, November 2018, Washington, DC.*
21. Kulkarni N, Shaik AA, **Gupta V\***. Biodegradable Nanoparticles to Repurpose Disulfiram for Non-Small Cell Lung Cancer (NSCLC) Treatment. *Controlled Release Society (CRS) Annual Meeting, July 2018, New York City, NY.*
22. Shukla SK, **Gupta V\***. Nanoparticle Mediated Sorafenib Delivery for Non-Small Cell Lung Cancer (NSCLC). *Controlled Release Society (CRS) Annual Meeting, July 2018, New York City, NY.*
23. Parvathaneni V, **Gupta V\***. Development and Characterization of Amodiaquine Nanoparticles for Synergistic Efficacy against Melanoma Cells. *Controlled Release Society (CRS) Annual Meeting, July 2018, New York City, NY.*
24. Kulkarni N, Shukla S, Shaik AA, Muth A, **Gupta V\***. Tyrosine-Kinase Inhibitor Conjugated Quantum Dots for Non-Small Cell Lung Cancer (NSCLC) Treatment. *AAPS Annual Meeting, November 2017, San Diego, CA.*
25. Shaik AA, Shukla S, Solanki NG, **Gupta V\***. Optimization of Process Parameters for 3D Printing of Carbamazepine-loaded Tablets using Kollicoat IR. *AAPS Annual Meeting, November 2017, San Diego, CA.*
26. Rakib-Uddin M, Muth A, **Gupta V\***. Identification of Novel Rho-associated kinase (ROCK) Inhibitors by Repurposing FDA Approved Drug Molecules. *AAPS Annual Meeting, November 2017, San Diego, CA.*
27. Shukla S, Kulkarni N, Shaik AA, Patel KK, **Gupta V\***. Development of Metformin-loaded Liposomes for Enhanced Efficacy against Non-Small Cell Lung Cancer (NSCLC). *AAPS Annual Meeting, November 2017, San Diego, CA.*
28. Parvathaneni V, Shaik AA, Shukla S, **Gupta V\***. Formulation and Evaluation of Pirfenidone Liposomes for Efficacy in Lung Cancer Treatment. *AAPS Annual Meeting, November 2017, San Diego, CA.*
29. Vaidya B, **Gupta V\***. Cationic PLGA Nanoparticles for Improved Therapeutics in Non-Small Cell Lung Cancer. *AAPS Annual Meeting, November 2017, San Diego, CA.*

30. Sullivan C, Guerrero Y, Alberni J, Solomon D, Soans C, **Gupta V**, Gupta N. NeoCULTURE™: An Innovative High Throughput Screening Focused Microfluidic Well Plate for 2D/3D Cell Culture. *AAPS Annual Meeting*, November 2017, San Diego, CA.
31. Sullivan C, Guerrero Y, Alberni J, Solomon D, Soans C, **Gupta V**, Gupta N. NeoIMA™: A Nano-liter Error-free Microfluidic Well Plate for Immunoassay-based Applications. *AAPS Annual Meeting*, November 2017, San Diego, CA.
32. Vaidya B, **Gupta V\***. Surface Modified Cationic Nanoparticles for Improved Efficacy against Non-Small Cell Lung Cancer. *AAPS Annual Meeting*, November 2016, Denver, CO.
33. Liu JR, Solomon DE, Mar CN, **Gupta V**, Gupta N. Neo3DPlate™: A Novel High Throughput Screening Enabled Microfluidic 3D Cell Culture Plate. *AAPS Annual Meeting*, November 2016, Denver, CO.
34. Magee JA, Gochi A, **Gupta V\***. Multiple Pathway Modulating Therapy for Pulmonary Hypertension – A Survey of Practice Patterns and Perceptions. *Chest – Annual Meeting of American College of Chest Physicians*, October 2016, Los Angeles, CA.
35. Gochi A, Magee J, **Gupta V\***. Assessing the Need for a Multiple Pathway Modulating Therapy for Pulmonary Hypertension Treatment. *Pulmonary Hypertension Association (PHA) International PH Conference*, June 2016, Dallas, TX.
36. **Gupta V\***, Sumbria RK, Bradford G, Yu J. Evaluation of Student Perceptions about the Use of Active Learning Tools in Pharmaceutical Compounding Laboratory. *American Association of Colleges of Pharmacy (AACP) Annual Meeting*, July 2016, Anaheim, CA.
37. Vaidya B, Huen M, **Gupta V\***. Development and characterization of Nintedanib loaded PLGA nanoparticles for improved efficacy against pulmonary fibrosis. *Controlled Release Society (CRS) Annual Meeting*, July 2016; Seattle, WA.
38. Vaidya B, **Gupta V\***. Erlotinib-Cyclodextrin Complex loaded Biodegradable Nanoparticles for Enhanced Anti-Proliferative Efficacy against Non-small cell Lung Cancer. *American Thoracic Society (ATS) Annual Meeting*, May 2016, San Francisco, CA.
39. Vaidya B, **Gupta V\***. PLGA Nanoparticle based Synergistic Combination of Erlotinib and Quinacrine for Enhanced Therapeutic Efficacy against Non-Small Cell Lung Cancer. *AAPS Annual Meeting*, October 2015, Orlando, FL.
40. Anselmo AC, Kumar S, **Gupta V**, Pearce A, Ragusa A, Muzykantov V, Mitragotri S. A Physical, Chemical, and Biological Approach to Targeting Nanoparticles to Lung Endothelium: Leveraging Shape Effects, Cellular Hitchhiking and Antibody Targeting. *American Institute of Chemical Engineers (AIChE) Annual Meeting*, November 2015; Salt Lake City, UT (Oral Presentation).
41. Patel R, Vaidya B, **Gupta V\***. Novel Targeted Therapeutics for Cardiopulmonary Disorders. *Southern California Conferences for Undergraduate Research (SCCUR)*. November 2014; Fullerton, CA.
42. Anselmo AC, Gilbert JB, Kumar S, **Gupta V**, Kohen RE, Rubner MF, Mitragotri S. Delivering Cellular Backpacks to Lungs by Hitchhiking on Monocytes. *American Institute of Chemical Engineers (AIChE) Annual Meeting*, November 2014; Atlanta, GA.
43. Anselmo AC, **Gupta V**, Zern B, Pan D, Muzykantov V, Mitragotri S. RBC-Hitchhiking for Targeted Delivery of Nanoparticles to Lungs. *NanoDDS*, October 2013; La Jolla, CA.
44. **Gupta V**, Doshi N, Hwang BH, Mitragotri S. A Permeation Enhancer for Oral Delivery of Therapeutic Macromolecules. *American Institute of Chemical Engineers (AIChE) Annual Meeting*, November 2013; San Francisco, CA.

45. Kolhar P, Anselmo AC, **Gupta V**, Pant K, Prabhakarandian B, Ruoslahti E, Mitragotri S. Using Shape Effects to Enhance Nanoparticle Targeting to Lungs and Brain. *American Institute of Chemical Engineers (AIChE) Annual Meeting*, November 2013; San Francisco, CA.
46. Anselmo AC, **Gupta V**, Mitragotri S. Delivering Nanoparticles to Lungs and Brain Via Hitchhiking On Red Blood Cells. *American Institute of Chemical Engineers (AIChE) Annual Meeting*, November 2013; San Francisco, CA.
47. Lee JH, **Gupta V**, Mitragotri S. Development of Enteric Coated Hard Gelatin Capsules for Oral Delivery of Macromolecules. *SACNAS National Conference*, October 2012; Seattle, WA.
48. Perez M, **Gupta V**, Mitragotri S. Mucoadhesive Intestinal Devices for Oral Delivery of Macromolecules. *MAES National Conference*, October 2012; Las Vegas, NV.
49. Anselmo AC, **Gupta V**, Mitragotri S. Targeted Nanoparticle Delivery to Lungs: Hitchhiking onto Red Blood Cells. *5<sup>th</sup> Annual Clorox-Amgen UCSB Chemical Engineering Research Symposium*, October 2012; Santa Barbara, CA.
50. Anselmo AC, **Gupta V**, Mitragotri S. Hitchhiking of Nanoparticles On Red Blood Cells for Targeted Delivery to Lungs. *American Institute of Chemical Engineers (AIChE) Annual Meeting*, October 2012; Pittsburgh, PA (**Selected as Plenary Paper for Food, Pharmaceuticals and Bioengineering section**).
51. Lee JH, **Gupta V**, Mitragotri S. Oral delivery of Macromolecules Using Enteric Coated Gelatin Capsules. *EUREKA Undergraduate Presentation, UCSB*, May 2012; Santa Barbara, CA.
52. **Gupta V**, Hwang BH, Doshi N, Mitragotri S. Orally Bioactive Mucoadhesive Intestinal Calcitonin Delivery Systems. *Controlled Release Society (CRS) Annual Meeting*, July 2012; Quebec City, Quebec, Canada.
53. Patel BI, **Gupta V**, Ahsan F. PEG-PLGA Based Large Porous Particles for Pulmonary Delivery of a Highly Soluble Drug, Low Molecular Weight Heparin. *SOP Annual Research Days*, June 2012; TTUHSC, Amarillo, TX.
54. **Gupta V**, Ahsan F. Inhalable Microparticulate Formulations of Prostaglandin E<sub>1</sub> (PGE<sub>1</sub>) for Sustained and Selective Vasodilation in Pulmonary Arterial Hypertension (PAH). *American Association of Pharmaceutical Scientists (AAPS) Annual Meeting*, October 2011. Washington, DC.
55. Gupta N\*, **Gupta V\***, Ahsan F. Prolonged Pulmonary Vasodilation by Inhaled Liposomes of Fasudil in Monocrotaline (MCT) Induced Rat Model of PAH. *CRS Annual Meeting*, July 2011; National Harbor, MD. (**Podium Presentation**) \*Equal Contribution
56. **Gupta V**, Gupta N, Ahsan F. Inhalable Formulations of Prostaglandin E<sub>1</sub> for Sustained and Pulmonary Selective Vasodilation in PAH-Induced Rats. *International Society for Aerosols in Medicine (ISAM) Biannual Congress*, June 2011, Rotterdam, The Netherlands.
57. **Gupta V**, Nahar K, Ahsan F. Prostaglandin E<sub>1</sub> (PGE<sub>1</sub>) Encapsulated Large Porous Microparticles – An Approach for Sustained Pulmonary Vasodilation. *AAPS Annual Meeting*, November 2010. New Orleans, LA.
58. **Gupta V**, Ahsan F. Design and Evaluation of PGE<sub>1</sub> Loaded PLGA Nanoparticles by Modified Nanoprecipitation Method for Pulmonary Arterial Hypertension (PAH) Treatment. *Nanomedicine and Drug Delivery Symposium (NanoDDS)*, October 2010, Omaha, NE.
59. **Gupta V**, Ahsan F. Inhalable Liposomes of Fasudil – a Novel Rho-Kinase Inhibitor for the Treatment of PAH. *CRS Annual Meeting*, July 2010; Portland, OR.

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60. Patel BI, **Gupta V**, Ahsan F. PEG-PLGA Block Copolymer Microparticles of Low Molecular Weight Heparins (LMWH) for Pulmonary Delivery. *CRS Annual Meeting*, July 2010; Portland, OR.
  61. Patel BI, **Gupta V**, Ahsan F. PEG-PLGA Block Copolymer Microparticles of Low Molecular Weight Heparins (LMWH) for Pulmonary Delivery. *SOP Annual Research Days*, June 2010; TTUHSC, Amarillo, TX.
  62. **Gupta V**, Ahsan F. Respirable PLGA Microspheres of PGE<sub>1</sub>-HP-β-CD Complex for PAH Treatment. *TTUHSC Student Research Week*, March 2010; Lubbock, (TX).
  63. **Gupta V**, Ahsan F. Respirable PLGA Microspheres of PGE<sub>1</sub>-HP-β-CD Complex for Pulmonary Arterial Hypertension (PAH) Treatment. *AAPS Annual Meeting*, November 2009; Los Angeles, CA.
  64. **Gupta V**, Ahsan F. Core Modified PGE<sub>1</sub> Microspheres as Non-invasive Approach for Pulmonary Arterial Hypertension (PAH) Treatment. *SOP Annual Research Days*, June 2009; TTUHSC, Amarillo, TX.
  65. **Gupta V**, Ahsan F. Core Modified PGE<sub>1</sub> Microspheres as Non-invasive Approach for Pulmonary Arterial Hypertension (PAH) Treatment. *ISAM Biannual Congress*, May 2009; Monterey, CA.
  66. **Gupta V**, Rawat A, Ahsan F. Inhalable Cationic Porous Microspheres of PGE<sub>1</sub> for Treatment of Pulmonary Arterial Hypertension (PAH). *AAPS Annual Meeting*, November 2008; Atlanta, GA.
  67. Bai S, **Gupta V**, Majumder Q, Ahsan F. Lactose-Based Dry Powder Formulations of Low Molecular Weight Heparin for Pulmonary Delivery. *AAPS Annual Meeting*, November 2008; Atlanta, GA.
  68. **Gupta V**, Rawat A, Ahsan F. PGE<sub>1</sub> microparticles for the treatment of pulmonary arterial hypertension. *CRS Annual Meeting*, July 2008; New York City, NY.
  69. **Gupta V**, Ahsan F. Polyethylenimine Based Formulations for Increasing Bioavailability and Half-life of Prostaglandin E<sub>1</sub> (PGE<sub>1</sub>) via the Pulmonary Route. *AAPS Annual Meeting*, November 2007; San Diego, CA.
  70. **Gupta V**, Lyte M. Efficacy of α and β Adrenergic Receptor Antagonists to Interrupt Neuroendocrine Hormone Induced Bacterial Growth: Potential as Antibacterial Agents. *SOP Annual Research Days*, August 2006; TTUHSC, Amarillo, TX.

\*Corresponding author

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### **GRANTSMANSHIP and RESEARCH SUPERVISION**

#### **Active Funding:**

1. **Woolsey Pharmaceuticals – Private Industry Research Grant**  
Gupta, Vivek (PI)  
**Research Focus:** Delivery Systems for Hydrophilic Drugs
2. **Prodigy Biotech – Private Industry Research Grant**  
Gupta, Vivek (PI)  
**Research Focus:** Oral Formulations for Biologics
3. **Radius Health – Private Industry Research Grant**  
Gupta, Vivek (PI)  
**Research Focus:** Development of a UPLC Method for a Peptide Drug
4. **PulmoSIM Therapeutics – Private Industry Research Grant (Multiple Awards)**

Gupta, Vivek (PI)

**Research Focus:** *In-vitro* and *In-vivo* studies for efficacy of lead compounds in PAH and IPF

**5. National Institutes of Health (NIH) NHLBI (R15)**

Gupta, Vivek (PI)

**Title:** Targeting of Apoptotic and Autophagy Pathways for Treatment of Pulmonary Arterial Hypertension (PAH)

**6. American Heart Association (AHA) (AIREA)**

Gupta, Vivek (PI)

**Title:** Novel Therapies for Pulmonary Hypertension – Mechanism Based Drug Repositioning for Superior Therapeutic Outcomes

**Funded Grants:**

7. **Project Title:** Development and testing microfluidic chip based devices/tools for the continuous preparation of emulsion based drug delivery systems (08/01/2017 – 07/31/2019)  
**Direct Costs:** \$15,000, **Funding Agency:** Neofluidics, Inc., **Ref:** NFSJ082017
8. **Project Title:** Development of a Novel Therapy against Malignant Mesothelioma (06/01/2018 – 05/31/2019)  
**Direct Costs:** \$5,000. **Funding Agency:** OGSR, St. John's University
9. **Project Title:** Purchase of *In-vivo* Hypoxia chamber and hemodynamic measurement system (03/01/2018)  
**Direct Costs:** \$22,132. **Funding Agency:** CPHS, St. John's University
10. **Project Title:** Nanocarriers assisted Combination Therapy for Non-Small Cell Lung Cancer (NSCLC) Treatment (06/01/2017 – 08/30/2017)  
**Direct Costs:** \$10,000. **Funding Agency:** St. John's University
11. **Project Title:** A Targeted multi-pronged approach for anthrax therapy (01/15/2014 – 12/31/2014).  
**Direct Costs:** \$20,000. **Funding Agency:** Keck Graduate Institute. **Ref No:** R0639
12. **Project Title:** A Novel Bio-engineered Oral Delivery System for Exenatide for Type-II Diabetes Treatment (07/01/2012 – 06/30/2013).  
**Direct Costs:** \$70,424. **Funding Agency:** Santa Barbara Foundation.

**Graduate Students Supervised:**

• **St. John's University**

- |                                      |                           |
|--------------------------------------|---------------------------|
| 1. Sruthi Sarvepalli                 | Fall 2019 – Present       |
| 2. Nabeela Fatima Baig (Co-mentored) | Spring 2019 – Present     |
| 3. Mimansa Goyal                     | Fall 2018 – Present       |
| 4. Gautam Chauhan                    | Fall 2018 – Present       |
| 5. Xuechun Wang                      | Spring 2018 – Present     |
| 6. Nishant Kulkarni                  | Fall 2016 – Present       |
| 7. Snehal Shukla                     | Spring 2017 – Spring 2021 |
| 8. Vineela Parvathaneni              | Spring 2017 – Fall 2020   |
| 9. Abdul Althaf Shaik                | Spring 2017 – Summer 2018 |
| 10. Mohammed Rakib-Uddin             | Spring 2017 – Fall 2018   |

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- **Keck Graduate Institute**

- |  |             |
|--|-------------|
| 1. Jesslyn Magee (KGI School of Applied Life Sciences) | 2015 – 2016 |
| 2. Andrea Gochi (KGI School of Applied Life Sciences)  | 2015 – 2016 |
| 3. Katelyn Ortega (KGI School of Pharmacy)             | Summer 2015 |
| 4. Taylor Walker (KGI School of Pharmacy)              | Summer 2015 |
| 5. Lindsey Wong (KGI School of Applied Life Sciences)  | Summer 2014 |

- **Postdoctoral Supervision:**

- |                             |                   |
|-----------------------------|-------------------|
| 1. Nikesh Gupta, PhD        | 02/2021 – Present |
| 2. Rasha Elbatanony, PhD    | 02/2019 – 11/2020 |
| 3. Bhuvaneshwar Vaidya, PhD | 04/2014 – 08/2016 |

- **Undergraduate Students Supervised:**

- **St. John's University**

- |                       |                           |
|-----------------------|---------------------------|
| 1. Gauravi Tulsyan    | Spring 2021 – Present     |
| 2. Daya Biju          | Spring 2021 – Present     |
| 3. Alison Tacderas    | Spring 2021 – Present     |
| 4. Prama Roy          | Spring 2021 – Present     |
| 5. Peter Tran         | Spring 2020               |
| 6. Haden Kim          | Spring 2020               |
| 7. Cristina Artis     | Spring 2020               |
| 8. Riya Vinoy         | Fall 2019 – Spring 2020   |
| 9. Ran Hur            | Summer 2019               |
| 10. Shemanta Akanda   | Fall 2018 – Summer 2019   |
| 11. Amanda Chan       | Spring 2018 – Summer 2019 |
| 12. Veronica Nguyen   | Spring 2017 – Fall 2019   |
| 13. Angela Bernasconi | Fall 2018 – Fall 2018     |
| 14. Rofadden Lazare   | Summer 2018 – Spring 2019 |

- **Keck Graduate Institute**

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|--|--------------------------|
| 1. Debarati Bhanja (Carnegie Mellon University)            | Summer 2016              |
| 2. Lavanya Logan (University of California San Diego)      | Summer 2016              |
| 3. Namrata Paladugu (Clemson University)                   | Summer 2016              |
| 4. Diana Esparza (Mount St. Mary's University)             | Summer 2016              |
| 5. Tiffany Lim (UCLA)                                      | Summer 2015              |
| 6. Melanie Huen (Scripps College)                          | Summer 2015, Fall 2015   |
| 7. Ruaab Patel (University of California Berkeley)         | Summer 2014; Spring 2015 |
| 8. Rachael Barton (Whitman College)                        | Summer 2014              |
| 9. Sydney Pong (Chapman University)                        | Summer 2014              |
| 10. Ronita Mukherjee (KGI School of Applied Life Sciences) | 2013-2014                |
| 11. Diane Rodden (KGI School of Applied Life Sciences)     | 2013-2014                |

- **UCSB, Dept. of Chemical Engineering**

- |                        |           |
|------------------------|-----------|
| 1. Joo Hee (Jenny) Lee | 2012-2013 |
| 2. Mayra Perez         | 2012-2013 |
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**TEACHING and SERVICE****Teaching:**

- **St. John's University (College of Pharmacy and Health Sciences)**
  1. PHS 256 – Pharmaceutical Analysis Graduate Course
  2. IPP 250 – Targeted Drug Delivery Systems Graduate Course
  3. IPP 233 – Journal Club, Industrial Pharmacy Graduate Course
  4. PHS 3601 – Pharmaceutics I Pharm. D. (P1)
  5. PHS 4601 – Extemporaneous Compounding Pharm. D. (P2)
  6. PHS 4602 – Biopharmaceutics and Pharmacokinetics Pharm. D. (P2)
  7. PHS 3151 – Calculations in Pharmacy Practice Pharm. D. (P2)
  8. BMS 1000 – Seminars in Biomedical Sciences BS Biomed
- **School of Pharmacy (SoP) Keck Graduate Institute**
  1. PHAR 310 – Pharmaceutics and Biopharmaceutics Pharm. D. (P1)
  2. PHAR 410 – Pharmacokinetics Pharm. D. (P2)
  3. PHAR 411 – Sterile Products Pharm. D. (P2)
  4. PHAR 330/331/440/441 – Inter-professional Education Pharm. D. (P1 & P2)
  5. ALS 400 – Team Masters' Project (TMP) MBS 2<sup>nd</sup> Year

**Service:**

- **St. John's University (College of Pharmacy and Health Sciences)**
  1. Member, Graduate Education and Progression Committee (GEPC) 08/2017 – 09/2020
  2. Member, SJU Research Committee (OGSR) 08/2017 – Present
  3. Organizer, Charles Jarowski Symposium in Industrial Pharmacy 01/2017 – Present
  4. Organizer, Dean's Hour, Careers in Pharmaceutical Sciences 01/2017 – Present
  5. Chapter Adviser, AAPS Student Chapter @ St. John's University 08/2016 – Present
- **Keck Graduate Institute, School of Pharmacy**
  1. **Member**, University of La Verne IACUC (KGI Representative) 11/2015 – 08/2016
  2. **Member**, Program Assessment Committee 07/2013 – 08/2016
  3. **Member**, Student Scholarships, Awards, Honors, and Ceremonies (SSAC) 07/2013 – 08/2016
  4. **Member**, Student Pharmacist Progression Committee (SPPC) 07/2014 – 08/2016
  5. **Member**, Pharmacokinetics Faculty Search Committee 10/2013 – 03/2014
- **Texas Tech University Health Sciences Center, School of Pharmacy**
  1. **Supervisor**, Drug Delivery Systems Laboratory 2009-10
  2. **Chair**, Graduate Students' Association of Amarillo 2008-09
  3. **Chair**, AAPS Student Chapter @ TTUHSC 2009-10
- **Professional Service**
  1. Chair-Elect, AAPS NERD-G Leadership Committee April 2021 – Present
  2. Member, AAPS Inhalation and Nasal Community Leadership January 2021 – Present
  3. Member, AAPS Student Program Support Committee October 2020 – Present
  4. **Scientific Reviewer**, NIH SBIR Study Section ZRG1 AARR-P (11) May 2020 – Present
  5. **Member**, AAPS Novel Technology Year-round Task Team 08/2017 – 2019
  6. **Early Career Reviewer (ECR)** – Nat. Institutes of Health (NIH)-CSR March 2016 – 2019
  7. **Steering Committee Member**, AAPS INTFG 2014-2016
  8. Research Competitiveness Grants Program, **AAAS** 2014



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- **Editorial Contributions**

1. Review Editor, *Frontiers in Pharmacology* 2021 – Present
2. Editorial Advisory Board Member, *Pharmaceutical Research (Springer)* 2020 – Present
3. Editorial Board Member, *Drug Development and Industrial Pharmacy* 2020 – Present
4. Review Editor, *Frontiers in Nanotechnology* 2020 – Present
5. Advisory Board Member, *Challenges – A MDPI Journal* 2020 – Present
6. Editorial Board Member, *Journal of Nanostructure in Chemistry* 2019 – Present
7. Editorial Board Member, *International Journal of Molecular Sciences* 2020 – Present
8. Academic Editor, *PLoS One* 2019 – Present

- **Invited Peer-Review for Scientific Journals**

- Peer reviewer for multiple high-impact journals including *Nature Communications*, *Journal of Controlled Release*, *Journal of Liposome Research*, *Molecular Pharmaceutics*, *AAPS PharmSciTech*, *Journal of Pharmaceutical Sciences*, *Journal of Pharmacy and Pharmacology*, *International Journal of Nanomedicine*, *Diabetes*, *Metabolic Syndrome*, and *Obesity*, *Drug Design, Development, and Therapy*, *Expert Review of Respiratory Medicine*, *Oncotarget*.
- Abstract reviewer for annual meetings of Controlled Release Society (CRS), American Association of Pharmaceutical Scientists (AAPS), AAPS National Biotechnology Conference

- **Membership in Professional Societies**

1. American Heart Association (AHA) 2015 – Present
  2. Controlled Release Society (CRS) 2008 – Present
  3. American Association of Pharmaceutical Scientists (AAPS) 2007 – Present
  4. Pulmonary Hypertension Association (PHA) 2016 – 2019
  5. American Thoracic Society (ATS) 2015 – 2018
  6. Biomedical Engineering Society (BMES) 2015 – 2017
  7. The International Society of Heart and Lung Transplantation (ISHLT) 2014 – 2015
  8. American Institute of Chemical Engineers (AIChE) 2013 – 2014
  9. American Association of Colleges of Pharmacy (AACP) 2013 – 2014
  10. International Society of Aerosol Medicine (ISAM) 2009 – 2011
  11. American Association of Advancement of Science (AAAS) 2007 – 2011
-