Nishant S. Kulkarni
Ph.D. Candidate
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EDUCATION

Ph.D. in Pharmaceutical Sciences (Specialization in Industrial Pharmacy) Sep '18- Present
St. John's University, College of Pharmacy and Health Sciences
Current Ph.D. GPA: 3.92/4.0
Dissertation Focus: Re-inventing Malignant Pleural Mesothelioma Therapeutics

MS. in Pharmaceutical Sciences (Specialization in Industrial Pharmacy) Aug '16-Jul '18
St. John's University, College of Pharmacy and Health Sciences
Cumulative GPA: 3.64/4.00
Master's Thesis: Tyrosine Kinase Inhibitor Conjugated Quantum dots for the Treatment of Non-Small Cell Lung Cancer (NSCLC)

TECHNICAL SKILLS

Formulation Development (Invasive and Inhalable)
Development and optimization of hydrogel-based drug delivery systems
Development and optimization of targeted polymeric Nano drug delivery systems
Development of inorganic material-based drug delivery systems
Development of targeted lipid-based drug delivery systems

Expertise in Analytical Instruments
Ultra-Performance Liquid Chromatography (UPLC, Waters Inc.)
High Performance Liquid Chromatography (HPLC, Waters Inc.)
UV-VIS Spectrophotometer
Perkin Elmer FTIR instrument
Bruker Nuclear Magnetic Resonance (NMR)
TA.XT *plusC*- Texture Analyzer
EVOS-FL Fluorescence Microscope
Zeiss LSM 880 Confocal Microscope
Applied Biosystems- QuantStudio-3
BD Accuri C6- Flow cytometer
Cellometer Vision-Nexcelom Biosciences
Molecular Modeling and in-silico simulation studies (Maestro, Schrödinger)

Cell and Molecular Biology
Cell Culture Studies (Extensive hands-on experience in 2-D & 3-D cell models)
Tissue Culture- Immunofluorescence/Immunohistochemistry
Cell based apoptosis & autophagy inhibition kit-based assays
Flow Cytometry- Fluorescence intensity, Cell cycle analysis, Apoptosis assays
Western Blotting & Polymerase Chain Reaction (PCR) techniques (2-D & 3-D models)
Investigation of mechanism of action for a newly repositioned molecule

PEER REVIEWED ARTICLES AND BOOK CHAPTERS (Citations as on 06/07/21- 248*)

Arranged as per order of authorship

1. **Kulkarni NS** and Gupta V, Repurposing Therapeutics for Malignant Pleural Mesothelioma (MPM) – Updates on Clinical Translations and Future Outlook, *Critical Reviews in Oncology and Hematology*, 2021 *(Submitted)*
2. **Kulkarni NS** and Gupta V, Current Trends in Microfluidics Assisted Continuous Processing of Drug Delivery Systems, *Drug Discovery Today*, 2021 *(Submitted)*
3. **Kulkarni NS**, Shukla SK, Gupta V, Relative distribution of P-glycoprotein (P-gp) and its pharmacological relevance, chapter ID: 71124, *An introduction to P-glycoprotein, Nova Publishers*, 2021
4. **Kulkarni NS**, Vaidya BV, Gupta V, 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*, 2021
5. **Kulkarni NS**, Vaidya B, Parvathaneni V, Bhanja, D, Gupta V. Repurposing Quinacrine for Treatment of Malignant Mesothelioma: In-Vitro Therapeutic and Mechanistic Evaluation. *International Journal of Molecular Sciences.* 2020
6. **Kulkarni NS**, Parvathaneni V, Shukla SK, Barasa L, Perron JC, Yoganathan S, Muth A, Gupta V. Tyrosine Kinase Inhibitor Conjugated Quantum Dots for Non-Small Cell Lung Cancer (NSCLC) Treatment. *European Journal of Pharmaceutical Sciences*, 2019
7. **Kulkarni NS**, Guererro Y, Gupta N, Muth A, Gupta V. Exploring Potential of Quantum Dots as Dual Modality for Cancer Therapy and Diagnosis. *Journal of Drug Delivery Science and Technology*, 2019
8. Parvathaneni V[1], **Kulkarni NS[1]**, Muth A, Kunda NK, Gupta V. Therapeutic potential of inhalable medications to combat coronavirus disease-2019. *Therapeutic Delivery*. 2021 ***([1]Equal contribution)***
9. Parvathaneni V, **Kulkarni NS**, Gupta V. 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 Muttil); *Springer International Publishing AG,* 2020
10. 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*, 2020.
11. Parvathaneni V, **Kulkarni NS**, Shukla SK, Farrales PT, Kunda NK, Muth A, Gupta V. Systemic Development and Optimization of Inhalable Pirfenidone Liposomes for Non-Small Cell Lung Cancer Treatment. *Pharmaceutics*, 2020
12. Shukla SK, **Kulkarni NS**, Farrales P, Kanabar DD, Parvathaneni V, Kunda NK, Muth A, Gupta V. Sorafenib Loaded Inhalable Polymeric Nanoparticles against Non-Small Cell Lung Cancer. *Pharmaceutical Research*, 2020
13. Vaidya B, **Kulkarni NS**, Shukla SK, Parvathaneni V, Chauhan G, Damon JK, Sarode A, Garcia JV, Kunda NK, Mitragotri S, Gupta V. Development of Inhalable Quinacrine Loaded Bovine Serum Albumin Modified Cationic Nanoparticles: Repurposing Quinacrine for Lung Cancer Therapeutics. *International Journal of Pharmaceutics,* 2020
14. Shukla SK, **Kulkarni NS**, Chan A, Parvathaneni V, Farrales P, Muth A, Gupta V. Metformin Encapsulated Liposome Delivery System: An Effective Treatment Approach Against Breast Cancer. *Pharmaceutics*, 2019
15. Parvathaneni V, **Kulkarni NS**, Muth A, Gupta V. Drug Repurposing: A Promising Tool to Accelerate the Drug Discovery Process. *Drug Discovery Today*, 2019
16. Parvathaneni V, Shukla SK, **Kulkarni NS**, Gupta V, Development and Characterization of Inhalable Transferrin Functionalized Amodiaquine Nanoparticles – Efficacy in Non-small Cell Lung Cancer (NSCLC) Treatment, *Materials Science and Engineering C*, 2021 *(Submitted)*

17. Chauhan G, Shaik AA, **Kulkarni NS**, Gupta V, The preparation of lipid-based drug delivery system using melt extrusion, *Drug Discovery Today*, 2020,
18. 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,* 2020.
19. 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,* 2020.
20. Vaidya B, Parvathaneni V, **Kulkarni NS**, Shukla SK, Damon JK, Sarode A, Kanabar D, Garcia JV, Mitragotri S, Muth A, Gupta V. Cyclodextrin Modified Erlotinib Loaded PLGA Nanoparticles for Improved Therapeutic Efficacy Against Non-Small Cell Lung Cancer *International Journal of Biological Macromolecules*, 2018
21. Parvathaneni V, Elbatanony R, Shukla SK, **Kulkarni NS**, et.al., Bypassing P-glycoprotein mediated efflux of afatinib by cyclodextrin complexation – Evaluation of intestinal absorption and anti-cancer activity, *Journal of Molecular Liquids*, 2021,
22. Wang X, Parvathaneni V, Shukla SK, **Kulkarni NS**, Muth A, Kunda NK, Gupta V, Inhalable resveratrol-cyclodextrin complex loaded biodegradable nanoparticles for enhanced efficacy against non-small cell lung cancer, *International journal of biological macromolecules*, 2021

ACCEPTED POSTER ABSTRACTS

International Conferences

1. **Kulkarni NS** and Gupta V, Development of Gelatin Methacrylate (GelMa) Hydrogels for Versatile Intracavitary Applications, PharmSci360 Annual Meeting, October 2021, Philadelphia, PA
2. **Kulkarni NS** and Gupta V, Repurposing an Anthelmintic Drug for the Treatment of Malignant Pleural Mesothelioma (MPM), PharmSci360 Annual Meeting, October 2021, Philadelphia, PA
3. **Kulkarni NS**, Vaidya BV, Gupta V, LOX-1 Targeted Inhalable Nanotherapy of Amodiaquine for Treatment of Pulmonary Arterial Hypertension (PAH). PharmSci360 Annual Meeting, November 2020, Online. **(Best Abstract)**
4. **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.
5. **Kulkarni NS**, 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
6. **Kulkarni NS**, 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.
7. Parvathaneni V, **Kulkarni NS**, 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.
8. Shukla S, **Kulkarni NS**, 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.

National Conferences

1. **Kulkarni NS**, 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.
2. **Kulkarni NS** and Gupta V. Repurposing an Anti-malarial drug for the Treatment of Malignant Mesothelioma. NJPhAST Regional Meeting, May 2018, Whippany, NJ
3. **Kulkarni NS**, Shukla S, Shaik AA, Muth A, Gupta V. Tyrosine-Kinase Inhibitor Conjugated Quantum Dots for Non-Small Cell Lung Cancer (NSCLC) Treatment. Northeast regional discussion group, April 2018. Storrs, CT.

Local Conferences

1. **Kulkarni NS** and Gupta V. Re-inventing Malignant Pleural Mesothelioma (MPM), Research Month 2021, St. John's University, Queens, NY
2. **Kulkarni NS** and Gupta V. Repurposing an Anti-malarial drug for the Treatment of Malignant Mesothelioma. Dr. Charles Jarowski Annual Symposium, 2019, St. John's University, Queens, NY **(Best Poster)**
3. **Kulkarni NS**, Shukla S, Shaik AA, Muth A, Gupta V. Tyrosine-Kinase Inhibitor Conjugated Quantum Dots for Non-Small Cell Lung Cancer (NSCLC) Treatment. Dr. Charles Jarowski Annual Symposium, 2018, St. John's University, Queens, NY. **(Selected among top 3 Posters)**
4. Akanda S, **Kulkarni NS**, Gupta V, Biodegradable Cationic Mefloquine Nanoparticles for the treatment of Non-Small Cell Lung Cancer (NSCLC) Treatment, Research Month 2021, St. John's University, Queens, NY

PROFESSIONAL EXPERIENCE

Research Assistant at Gupta Lab- St. John's University Jan '19-Present

- Responsibilities: Research and development of inorganic nanomaterial-based drug delivery systems for pulmonary disorders

Graduate Teaching Assistant at St. John's University Sep '17-Dec'18

- Responsibilities: Conducting lab courses for undergraduate students and develop their practical sk

Animal Care Center associate Sep '16-Aug '17

- Responsibilities: Handling and maintaining health of lab animals used for pharmacological and biological testing

Sunsheen Cosmetics, Palghar, India: Formulation Development Team Nov '15- Jul '16

- Responsibilities: Development of semisolid cosmetic products including gels, creams and lotions for topical use, intended to be prescribed by Dermatologists for various skin conditions.

Research Internship: International Student Exchange Program May '14-Jun '14

- University of Algarve, Faro, Portugal, Department of Organic Chemistry and Pharmacology
- Project Undertaken: Isolation of Etoricoxib and Spironolactone from tablets and testing their activity on Calcium ATPase pumps in vitro

ACHIEVEMENTS AND RECOGNITIONS

1. Best Abstract Award at American Association of Pharmaceutical Sciences, 2020
2. Chair- Student Chapter of American Association of Pharmaceutical Sciences at St. John's University
3. Best Poster Award- Dr. Charles Jarowski Symposium at St. John's University, 2019

TEACHING AND PROFESSIONAL AFFILIATIONS

PHR 5201- Biomedical Compounding Lab IV (Pharm. D)	Fall '17 & '18
PHS 3303- Biomedical Lab-III (Pharm. D)	Spring '18
Chair, AAPS Student Chapter @ St. John's University	Sep '19-May '20
Organizing Committee, Dr. Charles Jarowski Symposium in Industrial Pharmacy	Sep '17-Present
Organizer, Dean's Hour, Careers in Pharmaceutical Sciences	Sep '17-Present
Sports Secretary, Dr. Bhanuben Nanavati College of Pharmacy	Aug '13-May'14
Associate General Secretary, Dr. Bhanuben Nanavati College of Pharmacy	Aug'14-May '15

ACTIVE AND PAST PROFESSIONAL MEMBERSHIPS

American Association of Pharmaceutical Scientists (AAPS)	Active
American Heart Association (AHA)	2019-2020
Controlled Release Society (CRS)	2018-2019

UNDERGRADUATE STUDENTS TRAINED

1. Cristina Artis (B.S. Biology)	Spring '20
2. Shemanta Akanda (Pharm.D)	Fall '18-Spring '20
3. Angela Bernasconi (Pharm. D)	Fall '18-Spring '19

PROFESSIONAL REFERENCES

Dr. Vivek Gupta
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St. John's University,
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Dr. Matt Burke
Head of Clinical Development and
Pharmaceutical Sciences, Radius Health Inc.
Wayne, PA
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Dr. Munira Momin
Professor and Principal
SVKM's Dr. Bhanuben Nanavati College of
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