

SIDDHARTH UPPAL

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EDUCATION

- 2019-Present **PhD, Pharmaceutical Sciences (Bioinformatics)**
School of Pharmacy, University of Wisconsin-Madison Madison, WI
- 2015-2019 **Bachelor of Pharmacy (Hons.)**
Birla Institute of Technology and Science (BITS), Pilani Rajasthan, India
GPA: 9.43/10

RESEARCH EXPERIENCE

- 2019-Present **Graduate Research Assistant**
School of Pharmacy, University of Wisconsin-Madison Madison, WI
Lab of [Prof. Jason Kwan](#)
- Elucidated key conditional biosynthetic pathways from marine sponge metagenomes using both manual and automated comparative genomic methods
 - Investigated fire induced dysbiosis and eubiosis of soil microbial community by analyzing 16S soil metagenomes with Phyloseq R package
 - Refactored 15,000+ lines of Python code from an automated metagenomic binning pipeline ([Autometa](#)); scripted self-updating-auto-documentation of entire codebase; added CI/CD
- 2019 **Research Intern**
Mechanobiology Institute, National University of Singapore Singapore
Lab of [Prof. Henry Yu](#)
- Generated prediction model to understand topographic design parameters influencing maturation of hepatocytes differentiated from induced pluripotent stem cells
- 2018 **Research Intern**
Department of Biomedical Engineering, Duke University Durham, NC
Lab of [Prof. Ashutosh Chilkoti](#), Alan L. Kaganov Professor and Chair
- Explored the use of recombinant Elastin like polypeptides to deliver platinum-based anticancer therapeutics using plasmid cloning and recombination; characterization was done using, Gel electrophoresis, HPLC, UV-Vis spectroscopy, Cary and DLS
- 2017 **Intern**
Abbott, India Ltd Goa, India
Under guidance of Mr. Shailendra Singh, Chief Manager Stores
- Optimized raw material dispense time; Performed tablet formulation and QA

PUBLICATIONS

1. [S. Uppal](#); K.S. Italiya, D.; Chitkara; A. Mittal.; Nanoparticulate-based drug delivery systems for small molecule anti-diabetic drugs: An emerging paradigm for effective therapy, *Acta Biomaterialia*, 2018. 81: p. 20-42.
<https://doi.org/10.1016/j.actbio.2018.09.049>

PRESENTATIONS

- 2018 **Poster presentation**, Nanoparticulate-based drug delivery systems for anti-diabetic drugs. International Conference on Life Science Research & its

Interface with Engineering and Allied Sciences (LSRIEAS), Nov 1-3, BITS
Pilani, India

PROFESSIONAL/ LEADERSHIP ROLES

2020-Present	Career Panel and Forum Design Head , MIKIW 2021 MIKIW 2021 (conference) Madison, WI
	<ul style="list-style-type: none">– Designed virtual map at gather.town. The map is capable of hosting and managing 200+ attendees and features customized spaces for poster presentation, talks, lounge, breakout rooms and sponsor booths– Hosted panel discussions with scientists to expose students to different career possibilities and benefit students both professionally and socially
2020-Present	Professional Development and Workshop Chair American Association of Pharmaceutical Scientists (AAPS) Madison, WI
	<ul style="list-style-type: none">– Hosted roundtable discussions with professionals in diverse career paths to empower the graduate students with industry knowledge and different perspectives in pharmaceutical sciences– Founded book club for continuous engagement and learning of graduate students
2020	Science Outreach Volunteer Saturday Science, Wisconsin Institute of Discovery Madison, WI
	<ul style="list-style-type: none">– Conducted hands-on interactive stations centered around a scientific topic allowing kids, teenagers, and families to learn science in a fun and engaging manner
2019-2020	Graduate Teaching Assistant Parenteral Therapy and Nutrition Madison, WI
	<ul style="list-style-type: none">– Supervised 2nd and 3rd year PharmD students in aseptic handling techniques, pharmaceutical calculations, advanced compounding, and compounding / dispensing of sterile products under guidance of Prof. Melgardt de Villiers

SCHOLARSHIPS

2019	Kenneth Connors Wisconsin Distinguished Graduate Fellowship
2018, 2019	Institute Merit Scholarship , awarded thrice, granted to top 2% students of the entire batch (~900 students)
2018	Khorana Scholarship , joint support of the Department of Biotechnology Govt. of India, Indo-U.S. Science and Technology Forum and WINStep Forward, given to about 50 students across India to support the students to undertake their summer research internship at top Universities across USA
2017, 2018, 2019	Tata Education and Development Trust , awarded thrice for academic excellence

TECHNICAL SKILLS

Languages	Python, R, Bash, Markdown, reStructured Text, Git
Resource managers	Slurm, HTCondor, Makeflow
Package managers	Conda, Homebrew
Wet lab	HPLC, Bacterial, cell and stem cell culture, UV-Vis spectroscopy, DLS, Gel electrophoresis

COURSEWORK

2019-2020	Pharmacokinetics, Principles of Pharmaceutical Science, Physiology of Microorganisms, Prokaryotic Molecular Biology, Research Ethics, C-programming, Medicinal Chemistry I and II, Natural Products
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ADDITIONAL SKILLS AND INTERESTS

2018-Present	Rock climber: Certified top rope and lead climber, diligent member of the local bouldering gym. Climbed outdoors at Tung Lung Chau (Hong Kong) and Devil's Lake (WI).
2004-Present	Skater: Started from skating with quads in India, shifted to in-line skates in Singapore and adopted ice-skates in Madison. Roller bladed entire perimeter of Singapore (111 km) in 12 hours