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# Khushboo Pathania

Ph.D Scholar, Pharmacology (CSIR-JRF)

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### **Objective**

To gain new skills and knowledge through hands-on experimentation, embracing challenging life situations, studying core scientific principles, and leveraging this knowledge to propel scientific progress and benefit humanity.



Ph. D (Pharmacology)	CSIR-JRF at UIPS, Panjab University, Chd		Oct, 2021- continued
Master of Pharmacy (Pharmacology)	UIPS, Panjab University, Chd	9.10 cgpa	2019-21
Bachelor of Pharmacy	UIPS, Panjab University, Chd.	7.24 cgpa	2012-16
SSC (12 <sup>th</sup> )	CBSE	91.2 %	2012
Matriculation (10 <sup>th</sup> )	CBSE	9.4 cgpa	2010

### Trainings and courses:

- · Pharmacovigilance training at PGIMER, Chandigarh (January, 2020- March, 2020).
- Online course of 4 weeks on 'Inside Cancer' from University of Bath, England (December, 2017).

### **Key achievements:**

- First prize in poster making (master's category) in 4th IBRO/APRC School on Translational neuroscience (Nov, 2019).
- · Qualified GPAT, 2019 and CSIR- JRF, 2019 (Rank-104).
- · Runner's up in poster making competition, 53rd NPW, Panjab University.
- · Participation in ICONICA-2020.

### **Scholarships:**

- · AICTE-masters scholarship for 2 years.
- · CSIR doctorate research in life sciences scholarship for 5 years.

### **Qualities**

- Confident
- Smart-worker
- Sincere & Optimistic
- Interpersonal Skills
- Quick learner with curiosity
- Unique perspective
- Creative

### **Research interests**

- Cancer
- Nanotechnology
- Biopolymers
- Cellular energetics

## **Industrial experience:**

Worked in Q.A. & Regulatory at Alpha drugs, Punjab (August, 2016- Feb, 2017).

#### **Technical skills**

### **Instrument operation and handling**

- UV-vis spectrophotometer
- Confocal microscopy
- FTIR spectrometer
- ELISA reader
- PCR
- DSC
- Gel electrophoresis
- Biosafety cabinet

# **Basic rodent handling**

## **Publications:**

### Research papers

# *In-vitro* cell culturing

- Cell handling and culturing
- Cytotoxicity assays
- Metabolic assays
- DNA/RNA isolation
- Western blotting
- Cellular uptake assay

ch p	papers
	Pathania K, Sah SP, Salunke DB, Jain M, Yadav AK, Yadav VG, Pawar SV. Green synthesis of
	lignin-based nanoparticles as a bio-carrier for targeted delivery in cancer therapy. Int J Biol
	Macromol. 2023 Feb 28;229:684-695.
	Pothal, P, Pathania, K., Kumar, S, Kaur, J, Sah, S. P, Singh, R, & Pawar, S. V. Lignin-chitosan
	biocomposite film for antimicrobial activity: Fabrication, characterization and in-vitro
	evaluation. Materials Letters, 2023 133956.
	V. Mutreja, A. Kumar, S. Sareen, K. Pathania, H. Sandhu, R. Kataria, S. V. Pawar, S. K. Mehta,
	J. Park, ChemistrySelect 2022, 7, e202200448. Aggregation-Induced Quenching of Carbon
	Dots for Detection of Nitric oxide
	DIE 11 MAR ANNEL END 1 1 DD 01 1 00 01 M 01 OVD OF

- □ D Kaushik, M Kaur, V Mutreja, K Pathania, DB Salunke, SC Sahoo, V. Saini, SV Pawar, SK Kansal, SK Mehta. Synthesis of quinoline based molecular probes for detection of nitric oxide Dyes and Pigments, 110226
- □ S Sharma, A Kaur, S Kumar, K Pathania, K Kumar, R Arora, S.K Mehta, et al. 2023. "Lignin Nanoparticles as a Novel Carrier for Efficacious Delivery of Toll like Receptor 7/8 Agonist: Physicochemical and In-Vitro Evaluation." Journal of the Indian Chemical Society 100 (5): 101008–8. https://doi.org/10.1016/j.jics.2023.101008.

### **Review papers**

- ☐ Mukheja, Y., Kaur, J., Pathania, K., Sah, S. P., Salunke, D. B., Sangamwar, A. T., & Pawar, S. V. (2023). Recent advances in pharmaceutical and biotechnological applications of lignin-based materials. International Journal of Biological Macromolecules, 124601.
- ☐ J Garg, K Pathania, SP Sah, SV Pawar. Nanostructured lipid carriers: a promising drug carrier for targeting brain tumours. Future Journal of Pharmaceutical Sciences 8 (25), 1-31

## **Book chapters**

- ☐ Brain tumor: an insight into in-vitro and in-vivo experimental models (Book Chapter, Bentham Science Publishers) K Pathania, S Sharma, SV Pawar and SP Sah.
- ☐ In-vitro models of age-related neurodegenerative diseases (Book Chapter, Bentham Science Publishers) S Sharma, K Pathania, SP Sah and SV Pawar.