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Profile Summary

A highly motivated and detail-oriented M.Pharm graduate with a specialization in Pharmacology, drug safety, regulatory affairs and hands-on research experience in neuroscience. Possesses a strong foundation in animal handling, behavioral paradigms, literature review and the investigation of molecular pathways in rodent models. Proven ability to contribute to scientific literature through publications and book chapters.

Education

Master of Pharmacy (Pharmacology)

Maharaja Ranjit Singh Punjab Technical University, Bathinda, Punjab, India

2023 – 2025

CGPA : 8.12

Bachelor of Pharmacy

Bahra University, Shimla Hills, Waknaghatal, Himachal Pradesh, India

2018 – 2022

CGPA: 7.41/10

Research Experience

➤ **M.Pharm Research Project**

Title: Investigating the neuroprotective effects of phenolic compounds against lead-induced neurotoxicity in rats through the TFEB pathway.

- **Animal Model Development:** Successfully established a chronic neurotoxicity model in rats through daily oral administration of lead acetate (100 mg/kg) for 30 days.
- **Behavioral Phenotyping:** Assessed cognitive deficits and motor coordination by conducting and analyzing data from the Morris Water Maze (spatial learning and memory) and the Rotarod test.
- **Biochemical Analysis:** Performed quantitative analysis of brain tissue (hippocampus and cerebellum) to evaluate key pathological markers (oxidative stress, inflammation, mitochondrial dysfunction).
- **Scientific Documentation & Analysis:** Maintained meticulous experimental records and performed statistical analysis using ANOVA for publication.

➤ **Internship (DST-SERB Funded Project)**

Project: Pharmacological evaluation of bombesin-like peptides in sepsis-induced cerebral injury, inflammation, and cognition in mouse model

Duration: 2 months

Institute: Department of Pharmacology, Central University of Punjab, India

- Proficiently handled and dosed mice for experimental procedures, ensuring adherence to ethical guidelines.
- Conducted a variety of behavioral paradigms to assess cognitive function and anxiety-like behaviors in mice.

- Gained experience in the surgical procedures related to inducing sepsis in a mouse model.
- Assisted in the collection and processing of brain tissue for histological and biochemical analysis.
- Maintained detailed and accurate scientific documentation of experimental protocols and results.
- Contributed to the analysis of data and the preparation of findings for discussion.

Industrial Training

Rosett Medicare Pharma, Solan (28 Days)

Publications & Book Chapters

- **Research Paper (Published):** “Pratham Gautam, et al. (2025). Hesperidin mitigates lead-induced neurotoxicity via TFEB-dependent restoration of mitochondrial function, oxidative balance, and neuroinflammation in rats, *NeuroToxicology*, Volume 111, 2025, 103310, ISSN 0161-813X, <https://doi.org/10.1016/j.neuro.2025.103310>.
- **Book Chapter (Accepted, June 2025):** “Pratham Gautam. (2025). Treatment-Resistant Depression: Pharmacological Strategies. In *Recent Advances in Depression: Complications, Awareness, and Management*. Nova Sciences.”
- **Book Chapter (Accepted, June 2025):** “Pratham Gautam. (2025). The Role of Nutrition in Depression: Prevention and Management. In *Recent Advances in Depression*. Nova Sciences.”

Technical Skills

Data Analysis: GraphPad Prism, SPSS, Autodocking, and Pymol.

- Familiar with international drug safety regulation including ICH guidelines on safety and efficacy, FDA guidelines, CDSCO and CIOMS
- Literature screening and Review for safety information
- Critical thinking and root cause analysis
- Attention to detail
- Knowledge of Medical terminology

Workshops & Conferences

- National Seminar “CPCO 2K24” – Clinical and Pharmacovigilance Outlook
- International Conference on “Microbial Technologies for Sustainable Bioeconomy”
- National Workshop on “Navigating Network Pharmacology,” Amar Shaheed Baba Ajit Singh Jujhar Singh Memorial College of Pharmacy

Referees

Dr. Varinder Singh

Assistant Professor

Department of Pharmaceutical Sciences and Technology

Maharaja Ranjit Singh Punjab Technical University, Bathinda, Punjab, India

 varinderjassal17@gmail.com; varindersingh@mrsptu.ac.in

Relation: M.Pharm Project Guide

Dr. Anjana Bali

Assistant Professor

Department of Pharmacology

Central University of Punjab, Bathinda, Punjab, India

 anjana.bali@cup.edu.in

Relation: Internship Supervisor

Dr. Amit Bhatia

Professor

Department of Pharmaceutical Sciences and Technology

Maharaja Ranjit Singh Punjab Technical University, Bathinda, Punjab, India

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Relation: Head of Department