

Dr. Tanya Aggarwal

+91-9509255495 tanyaaggarwal92191@gmail.com Uttar Pradesh, India
linkedin.com/in/tanya-aggarwal-07b439175 0009-0004-3286-5874

SUMMARY

- Ph.D. in Biosciences (Reproductive Biology, 2025) with specialization in male reproductive toxicology.
- Research expertise in reproductive biology, toxicology, and environmental impacts on physiology, with hands-on experience in in vivo models, molecular assays, and biochemical analyses.
- Proven teaching and mentoring experience at undergraduate level in Zoology, Physiology, and Biochemistry.
- Strong academic record with publications in peer-reviewed journals of national and international repute.
- Committed to integrating innovative teaching-learning practices and advancing interdisciplinary research in Life Sciences.

TECHNICAL SKILLS

- **Animal Handling:** Swiss albino mice, dissection, testicular and reproductive tissue harvest, dosing (IV/IP/IM/SC)
- **Reproductive Assays:** Testicular marker profiling, hormone evaluation, histological evaluation
- **Molecular Techniques:** PCR, RT-qPCR, Gel electrophoresis, Cloning
- **Biochemical Techniques:** ELISA, Enzymatic assays, Oxidative stress markers
- **Instrumentation:** HPLC, GC-MS, Confocal Microscopy, FTIR, NMR

EDUCATION

- PhD in Bioscience - Reproductive Biology, Banasthali Vidyapith, Rajasthan, 2020–2025
- M.Sc. Zoology, Banasthali Vidyapith, Rajasthan, India, 2018
- B.Sc. Biosciences, Banasthali Vidyapith, Rajasthan, India, 2015

RELEVANT EXPERIENCE

- **2020–25:** Conducted a research project exploring the protective potential of garlic essential oil in mitigating lead-induced testicular toxicity. Designed experiments, managed lab schedules, handled animal studies, and analyzed hormonal and oxidative stress markers. **Banasthali Vidyapith**
- **2021–25:** Engaged in undergraduate teaching and lab coordination for subjects including Physiology, Biochemistry, and Reproductive Biology, supporting curriculum planning and experimental execution.
- **2018:** Completed training in Molecular Biology and Diagnostics at the Central Molecular Research Lab, **SGRRIMHS, Dehradun**

CONFERENCE PRESENTATIONS

- Awarded 2nd prize for best paper presentation: "Unmasking connections: probing the effect of Lead on male reproductive system and testosterone regulation" – 4th International Conference on Life Sciences and Biotechnology (IAZ & SAGE)
- Presented on "Medicinal plant extract therapeutics with Bioinformatics and Biostatistics" – International Conference on Emerging Trends of Statistical Sciences in AI and Its Applications (ETSSAA-2024)

PUBLICATIONS

- **Aggarwal, T., Rajpoot, A., & Sharma, V. (2024).** Garlic Bulb Essential Oil (GBEO) as a potential mitigator of lead nitrate-induced oxidative stress in Swiss albino male mice. *Toxicology International*, 31(4), 677–686.
<https://doi.org/10.18311/ti/2024/v31i4/45001>
- **Aggarwal, T., & Sharma, V. (2024).** Pathways and interventions in lead-induced male reproductive toxicity and testosterone dysregulation. *Biochemical and Cellular Archives*, 24(2).
<https://doi.org/10.51470/bca.2024.24.2.1393>
- **Aggarwal, T., & Sharma, V. (2025).** Protective efficacy of garlic essential oil on testicular biochemical markers in lead nitrate-treated Swiss albino male mice. *Journal of Ecophysiology and Occupational Health*, 25(1), 1–12.
<https://doi.org/10.18311/jeoh/2025/45791>
- **Gupta, S., Aggarwal, T., & Sharma, V. (2024).** Unravelling protective efficacy of Allium sativum essential oil against lead nitrate-induced toxicity in Swiss albino male mice lungs: A study on biochemical parameters. *Biochemical and Cellular Archives*, 24(2).
<https://doi.org/10.51470/bca.2024.24.2.1587>
- **Rajpoot, A., Aggarwal, T., & Sharma, V. (2024).** Unraveling the enigma of cardiac damage caused by lead: Understanding the intricate relationship between oxidative stress and other multifactorial mechanisms. *Toxicology*, 153984.
<https://doi.org/10.1016/j.tox.2024.153984>
- **Rajpoot, A., Sharma, V., & Aggarwal, T. (2024).** Microbial architects of environmental restoration. In *Advances in Environmental Engineering and Green Technologies* (pp. 226–243).
<https://doi.org/10.4018/979-8-3693-1618-4.ch010>
- **Aggarwal, T., & Sharma, V. (2025).** FUTURE TRENDS IN PHARMACEUTICAL TECHNOLOGY: EXPLORING THE POTENTIAL OF OOC, 3D PRINTING AND QUANTUM COMPUTING. In *Innovations in Pharmaceutical Technology: Transforming Drug Discovery and Development* (pp. 25–46). Zenodo.
<https://doi.org/10.5281/zenodo.14928902>

- **Aggarwal, T., & Sharma, V.** (2025). INTRODUCTION TO INNOVATIONS IN PHARMACEUTICAL TECHNOLOGY: SHAPING THE FUTURE OF DRUG DISCOVERY AND DEVELOPMENT. In *Innovations in Pharmaceutical Technology: Transforming Drug Discovery and Development* (pp. 67–89). Zenodo.
<https://doi.org/10.5281/zenodo.14930931>
- **Aggarwal, T., & Sharma, V.** (2025). Exploring the Protective Effects of Garlic Essential Oil Against Lead Nitrate-induced Reproductive Toxicity in Swiss Albino Mice. *Journal of Natural Remedies*, 25(4), 887–900.
<https://doi.org/10.18311/jnr/2025/44935>
- **Aggarwal, T., Rajpoot, A., Gupta, S., & Sharma, V.** (2025). Rural Tourism and Waste Disposal: Sustainable Practices for Environmental Preservation. *Journal of Environmental Biology Sciences*, 39, 97–109.
<https://connectjournals.com/03843.2025.39.97>

PEER REVIEWING & EDITORIAL CONTRIBUTIONS

- Reviewer for Reproductive Toxicology (Elsevier, ISSN: 0890-6238), 2025.
- Reviewer activity verified via ORCID: 0009-0004-3286-5874.

OTHER SKILLS

Software GraphPad Prism, SPSS, Microsoft Office Suite

Languages Hindi: Professional proficiency

English: Moderate proficiency

Research Skills Literature Review, Project Execution, Data Analysis, Scientific Writing, Ethical Handling of Laboratory Animals