

RESUME

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Major Areas of Research

- Allergy is a major public health concern globally for which there is no cure. The breach of peripheral immune tolerance to T-cells mediated by regulatory T-cells (Tregs) is a major cause of allergy. We are try to develop novel immune intervention strategies for development of allergen specific Tregs, which shall help in restoration of immune tolerance in allergic patients. Further, our group aims to understand the novel attributes of proteins imparting allergenic property. Based on the knowledge gaps addressed through these studies, we aim to project novel immunotherapeutic strategies for a permanent cure of allergy.
- The poor masses of India are maximally exposed to indiscriminate use of food colours, neutraceuticals, health supplements, preservatives. Owing to the huge diversity of the food commodities, it is extremely difficult to co-relate between chronic exposure of a particular food ingredient and ensuing immunosuppression. We are trying to study the impact of these xenobiotics present in food on the health of immune system and ways to mitigate the consequential toxicity.

Educational Qualifications

Degree	University	Subjects
Bachelor of Science (3 rd rank)	Lucknow University	Zoology, Botany, Chemistry
Master of Science (2 nd rank)	Banaras Hindu University	Biotechnology
Ph. D	Banaras Hindu University	Biotechnology (Immunology)

Details of employment (past & present)

- Worked as Junior Scientist from 29-8-2008 to 28-8-2011 at CSIR-Indian Institute of Toxicology Research.
- Worked as Scientist from 29-8-2011 to 28-8-2015 at CSIR-Indian Institute of Toxicology Research.

- Worked as Senior Scientist since 29-8-2015 to 28-08-2019 at CSIR-Indian Institute of Toxicology Research.
- Working as Principal Scientist since 29-8-2019 at CSIR-Indian Institute of Toxicology Research.

Professional recognition, awards, fellowships received

- Life member of Indian Nanoscience Society
- “**DBT Scholarship**” with all India **25th rank** for pursuing Masters degree in Biotechnology by Department of Biotechnology, Ministry of Science and Technology, Government of India.
- **GATE (Graduate Aptitude Test of Engineering)** 2003 in Life sciences qualified with **98.96** percentile with all India **35th rank**.
- **CSIR-NET JRF**: Qualified All India CSIR-NET for JRF (**SPM rank**) in 2004, secured position in top 20% and selected for Shyama Prasad Mukherjee award nomination.

Extramural projects and participation in CSIR projects

- A research grant entitled “**Assessment of immunological response in the pathogenesis of argemone oil poisoning**” awarded by DST.
- CSIR Supra Institutional project for 11th five year plan “Investigative toxicology- New paradigms”.
- CSIR Network project for 12th five year plan under “Nanomaterials: Applications and Impact on Safety, Health and Environment (NanoSHE)”.
- CSIR Network project for 12th five year plan under “Integrated NextGen approaches in health, disease and environmental toxicity (Indepth)”.

Publications

- Yadav S, Dwivedi A, **Tripathi A***. Biology of macrophage fate decision: Implication in inflammatory disorders. Cell Biol Int. 2022 Jul 16. doi: 10.1002/cbin.11854. Epub ahead of print. PMID: 35842768.
- Yadav S, Singh S, Mandal P, **Tripathi A***. Immunotherapies in the treatment of immunoglobulin E-mediated allergy: Challenges and scope for innovation (Review). Int J Mol Med. 2022 Jul;50(1):95. doi: 10.3892/ijmm.2022.5151. Epub 2022 May 26. PMID: 35616144.

- Shukla V, Asthana S, Singh S, **Anurag Tripathi***. Role of anthraquinones in *Cassia occidentalis* induced hepato-myo-encephalopathy. *J Ethnopharmacol.* 2021 Mar 1;267:113431. doi: 10.1016/j.jep.2020.113431. Epub 2020 Oct 1. PMID: 33011371.
- Shukla V, Asthana S, Yadav S, Rajput VS, **Tripathi A***. Emodin inhibited NADPH-quinone reductase competitively and induced cytotoxicity in rat primary hepatocytes. *Toxicol.* 2020 Dec;188:117-121. doi: 10.1016/j.toxicol.2020.10.018. Epub 2020 Oct 22. PMID: 33122156.
- Mishra S, Srivastava S, Divakar A, et al. Celecoxib reduces Deoxynivalenol induced proliferation, inflammation and protein kinase C translocation via modulating downstream targets in mouse skin. *Chem Biol Interact.* 2020;326:109128. doi:10.1016/j.cbi.2020.109128.
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- Rai A, Das M, **Tripathi A***. Occurrence and toxicity of a fusarium mycotoxin, zearalenone [published online ahead of print, 2019 Aug 26]. *Crit Rev Food Sci Nutr.* 2019;1-20. doi:10.1080/10408398.2019.1655388.
- Rai A, Dixit S, Singh SP, Gautam NK, Das M, **Tripathi A***. Presence of Zearalenone in Cereal Grains and Its Exposure Risk Assessment in Indian Population. *J Food Sci.* 2018 Dec; 83(12):3126-3133.
- Asthana S, Dixit S, Srivastava A, Kumar A, Singh SP, **Tripathi A***, Das M. Methylenecyclopropyl glycine, not pesticide exposure as the primary etiological factor underlying hypoglycemic encephalopathy in Muzaffarpur, India. *Toxicol Lett.* 2019 Feb;301:34-41.
- Kushwaha V, Tewari P, Mandal P, Tripathi A, Murthy PK. Troponin 1 of human filarial parasite *Brugia malayi*: cDNA cloning, expression, purification, and its immunoprophylactic potential. *Parasitol Res.* 2019 Jun;118(6):1849-1863.
- Mandal P, Tewari P, Kumar S, Yadav S, Ayanur A, Chaturvedi RK, Das M, **Tripathi A***. Argemone oil, an edible oil adulterant, induces systemic immunosuppression in Balb/c mice in an oral 28 days repeated dose toxicity study. *Chem Biol Interact.* 2018 Apr 12. pii: S0009-2797(18)30051-6. doi: 10.1016/j.cbi.2018.04.013. PubMed PMID: 29655912.
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- Yadav A, Kumar A, Das M, **Tripathi A***. Sodium benzoate, a food preservative, affects the functional and activation status of splenocytes at non cytotoxic dose. *Food Chem Toxicol.* 2016 Feb; 88:40-7.
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Books Edited

- Skin cancer: Pathogenesis and Diagnosis. 2021. ISBN. 978-981-16-0363-1. Springer nature publication. Editors: Dwivedi, A., Tripathi, A., Ray, R.S., Singh, A.K. (Eds.)

Book chapters

1. Bhupender Singh, Arun Karnwal, Anurag Tripathi and Atul Kumar Upadhyay. 2021. Food Allergens and Related Computational Biology Approaches: A Requisite for a Healthy Life. *Bioinformatics for agriculture: High-throughput approaches* Pg 145. Springer nature press. Editors: Atul Kumar Upadhyay, R. Sowdhamini, Virupaksh U. Patil.
2. Payal Mandal, Ankita Rai, Sakshi Mishra, Anurag Tripathi and Mukul Das. 2017. Mutagens in food. *Mutagenicity: Assays and Applications*, Pg 133-160. Elsevier press. Editors: Ashutosh Kumar, Vasily N. Dobrovolsky, Alok Dhawan, Rishi Shanker.
3. Vibha Shukla, Somya Asthana, Parul Gupta, Anurag Tripathi, Premendra D. Dwivedi and Mukul Das. 2017. Toxicity of naturally Occuring Anthraquinones. *Advances in Molecular Toxicology*. Vol. 11, pg 1-37. Elsevier press. Editors: James Fishbein and Jacqueline Heilman.
4. Asthana, S, Tripathi, A, Dwivedi PD, Kumar A and Das, M. 2017 Methylene-Cyclo-Propyl Glycine In Sapindaceae Family. *Horticultural Sciences: Perspectives and Applications*. Vol II, pg 281-294. Brillion Publishing (New York). Editor: K. V. Peter.