



Faculty Details Proforma Radhika Gupta



Title	Dr	First Name	Radhika	Last Name	Gupta	Photograph
Designation	Assistant Professor					
Address	Department of Biochemistry, Daulat Ram College, Delhi University, Delhi-110007					
Email - ID	radhikagupta@dr.du.ac.in					
Web Page	Nil					
Educational Qualification						
Degree	Institution				Year	
PhD	CSIR-IGI B				2010-2016	
MSc	Delhi University				2000-2002	
BSc	Delhi University				1997-2000	
Career Profile						
Assistant Professor in Department of Biochemistry: 29th July 2017 onwards Assistant Professor in Department of Biochemistry IHE: 16 th July-19 th December 2016 SRF: 1st august , 2010-15 th July 2016 Research specialist: June 2007-march 2010 (Johns Hopkins University, Baltimore , USA) JRF: October 2004-January 2007 (Dept of biochemistry, UDSC, New Delhi-110021)						
Administrative Assignments						
Website department representative: 2020-present Student amenities member: 2020-present Eco club-2018-19, 2023-24 Times of India ranking science dept: 2020-22 EVS coordinator: December 2022-present						
Areas of Interest / Specialization						
Biochemistry, infectious diseases, Hormones, protein biochemistry, Bioinformatics, biochemical techniques, nutritional biochemistry						

infectious diseases, Hormones, protein biochemistry, Bioinformatics, biochemical techniques, nutritional biochemistry to Undergraduate students

Research Guidance

Research guidance to undergraduate students in the field of zebrafish biology

Publications Profile

1. Mudgal, P., **Gupta, R.**, Joshi, A., Prakash, C., Gupta, K., Sachdeva, R., & Joshi, N. (2023). Assessment of Anxiolytic Activity of Brahmi (*Bacopa monnieri*) in Zebrafish Model System. *Journal of Natural Remedies*, 23(2), 661–670. <https://doi.org/10.18311/jnr/2023/31362>
2. Mudgal P, Bhasin C, Joshi A and **Gupta R** Zebrafish. A versatile learning tool. *Resonance* 2021 Nov,(11) 1499-1521
3. Lunge A, **Gupta R**, Choudhary E, Agarwal N. The unfoldase ClpC1 of *Mycobacterium tuberculosis* regulates the expression of a distinct subset of proteins having intrinsically disordered termini.. *J Biol Chem*. 2020 Jul 10;295(28):9455-9473
4. Babbar S, Manisha G, Dohare N, Goel A, **Gupta R** and Nanda S. Pollution controlling ability of plant species growing on college campus in Delhi, India. *Poll Res*. 38 (November Suppl. Issue) : S23-S29 (2019)
5. Gupta M, Babbar S, Goel A, **Gupta R**, Dohare N and S. Pollution Controlling Ability of Indigenous Plant Species Growing Around Drain in Delhi. *Poll Res*. 38 (November Suppl. Issue) : S29-S35 (2019)
6. **Gupta R**, Ranjan S, Yadav A, Verma B, Malhotra K, Madan M, Chopra O, Jain S, Gupta S, Joshi A, Bhasin C, Mudgal P. Toxic Effects of Food Colorants Erythrosine and Tartrazine on Zebrafish Embryo Development. *Curr Res Nutr Food Sci* 2019; 7(3).
7. Srivastava S, Chaudhary S, Thukral L, Shi C, Gupta RD, **Gupta R**, Priyadarshan K, Vats A, Haque AS, Sankaranarayanan R, Natarajan VT, Sharma R, Aldrich CC and Gokhale RS. (2015) Unsaturated lipid assimilation by mycobacteria requires auxiliary cis-trans enoyl CoA isomerase. *Chem Biol*. 17;22(12):1577-87. 5.3
8. Shukla J, **Gupta R**, Thakur KG, Gokhale R and Gopal B. (2014) Structural basis for the redox sensitivity of the *Mycobacterium tuberculosis* SigK-RskA σ -anti- σ complex. *Acta Crystallogr D Biol Crystallogr*. 70(Pt 4):1026-36. 2.5
9. Erdemli SB*, **Gupta R***, Lamichhane G, Bishai WR, Amzel LM and Bianchet MA. (2012) Targeting the cell wall of *Mycobacterium tuberculosis*: structure and mechanism of L,D-transpeptidase 2. *Structure* 5;20(12):2103-15. *Equal contribution. 5.6
10. Maiga M, Agarwal N, Ammerman NC, **Gupta R**, Guo H, Maiga MC, Lun S and Bishai WR. (2012) Successful shortening of tuberculosis treatment using adjuvant host-directed therapy with FDA-approved phosphodiesterase inhibitors. *PLoS One* 2012;7(2):e30749.3.23
11. Converse PJ, Eisenach KD, Theus SA, Nuermberger EL, Tyagi S, Ly LH, Geiman DE, Guo H, Nolan ST, Akar NC, Klinkenberg LG, **Gupta R**, Lun S, Karakousis PC, Lamichhane G, McMurray DN, Grosset JH and Bishai WR. (2010) The impact of mouse passaging of *Mycobacterium tuberculosis* strains prior to virulence testing in the mouse and guinea pig aerosol models. *PLoS One* 5(4):e10289. 3.23
12. **Gupta R**, Lavollay M, Mainardi JL, Arthur M, Bishai WR and Lamichhane G. (2010) The *Mycobacterium tuberculosis* gene, *ldtMt2*, encodes a non-classical transpeptidase required for virulence and resistance to amoxicillin. *Nature Medicine* (4):466-9. 30.6
13. Khare G, Gupta V, **Gupta R**, Gupta R, Bhat R and Tyagi AK. (2009) Dissecting the role of critical residues and substrate preference of a fatty acyl-CoA synthetase (FadD13) of *Mycobacterium tuberculosis*. *PLoS ONE*;4(12):e8387. 3.23
14. Agarwal N, Lamichhane G, **Gupta R**, Nolan S and Bishai WR. (2009) Cyclic AMP intoxication of macrophages by a *Mycobacterium tuberculosis* adenylate cyclase. *Nature* 460(7251):98-102. 38
15. Arora P, Goyal A, Natarajan VT, Rajakumara E, Verma P, **Gupta R**, Yousuf M, Trivedi OA, Mohanty D, Tyagi A, Sankaranarayanan R and Gokhale RS. (2009) Mechanistic and functional insights into fatty acid activation in *Mycobacterium tuberculosis*. *Nature Chemical Biology* 5(3):166-73. 12.7
16. Alahari A, Alibaud L, Trivelli X, **Gupta R**, Lamichhane G, Reynolds RC, Bishai WR, Guerardel Y

- and Kremer L. (2009) Mycolic acid methyltransferase, MmaA4, is necessary for anti-tubercular activity of thiacetazone in Mycobacterium tuberculosis. *Molecular Microbiology* 71(5):1263-77. 5.06
17. Singh A, Gupta R, Vishwakarma RA, Narayanan PR, Parmasivan CN, Ramanathan VD and Tyagi AK. (2005) Requirement of mymA operon for appropriate cell wall structure and persistence of M. tuberculosis in the spleen of guinea pigs. *Journal of Bacteriology* 187(12):4173-86. 2.6
18. Singh R, Rao V, Shakila H, Gupta R, Aparna Khera, Dhar N, Singh A, Koul A, Singh Y, Naseema M, Narayanan PR, Paramasivan CN, Ramanathan VD and Tyagi AK. (2003) Disruption of mptpB impairs the ability of Mycobacterium tuberculosis to survive in guinea pigs. *Molecular Microbiology* 50 (3): 751 – 762. 5.06

Book chapters

1. Ajitesh Lunge, Eira Choudhary, Rishabh Sharma, Radhika Gupta and Nisheeth Agarwal. Genome Engineering via CRISPR-Cas9 Systems 1st edition Elsevier to be published in January, 2020. Chapter 17: Functional understanding of CRISPR interference: its advantages and limitations for gene silencing in bacteria
2. Agarwal N, Gupta R. History, evolution and classification of CRISPR-Cas associated systems. *Prog Mol Biol Transl Sci.* 2021;179:11-76. doi: 10.1016/bs.pmbts.2020.12.012. Epub 2021 Feb 9. PMID: 33785174.

Conference Organization / Presentation (in the last three years)

1. International Conference on “Frontiers in Biochemistry and Biotechnology: Strategies to Combat Human Diseases” Shivaji College, Univ. of Delhi February 12-13, 2020
2. National Seminar on Vishva Guru Bharat, organized by Rajguru college, Patel chest institute, Delhi University, 2022
3. Present poster in International E-Conference on “Recent Trends in Drug Discovery and Development” organized by the Department of Chemistry, under the aegis of IQAC, Maitreyi College, University of Delhi on 8th and 9th October 2021.
4. Recent Advancements in Chemical Sciences: Health, Environment and Society" organized by the Department of Chemistry, Deshbandhu College, April 8th and 9th April 2022
5. Organised symposium on environmental issues on 24/05/2023
6. Organised conference on world environment day on 5th June 2023

Research Projects (Major Grants/Research Collaboration)

nil

Awards and Distinctions

CSIR-NET

DBT-RA fellowship

DS Kothari Fellowship

Association with Professional Bodies

Life Member of SBC

Other Activities

Involved in zebrafish research facility in Daulat Ram college since 2017. Training undergraduate students in basic research

Participated in one month faculty induction programme organized by GAD-TLC from 25th February to 27th March 2023.

Participated in two weeks refresher course on ‘Advanced Research Methodologies’ organized by Ramanujan TLC from 22nd May 2023 to 5th June 2023.

Participated in two weeks refresher course on ‘MANAGING ONLINE CLASSES & CO-CREATING MOOCs 26.0’ organized by Ramanujan TLC from 8th May to 22th May 2023.

