



## **Faculty Detail Performa**

## Name of Faculty

| Name        | Radhika Gupta            |         |
|-------------|--------------------------|---------|
| Designation | Assistant Professor      | (日) (日) |
| Department  | Biochemistry             | 15      |
| Email       | radhikagupta@dr.du.ac.in | WYNE WA |



#### **Educational Qualification**

| Degree           | Institution                 | Year |
|------------------|-----------------------------|------|
| Ph.D             | IGIB, New Delhi             | 2015 |
| M.Sc             | Delhi University            | 2002 |
| B.Sc             | Delhi University            | 2000 |
| Higher Secondary | Air Force Bal Bharti School | 1997 |
|                  | (CBSE)                      |      |

### **Full Time Research Experience**

| Designation         | Institute     | Time period     | Nature of             |
|---------------------|---------------|-----------------|-----------------------|
|                     |               |                 | Appointment           |
| Research specialist | Johns Hopkins | June 2007-March | Research work in the  |
|                     | University    | 2010            | field of tuberculosis |

### **Full time Teaching Experience**

| s.n | Designation         | Institution  | Time Period | Nature of Appointment          |
|-----|---------------------|--------------|-------------|--------------------------------|
| 0   |                     |              |             |                                |
| 1.  | Assistant Professor | Institute of | July2016-   | Teaching undergraduate         |
|     |                     | Home         | December2   | students of BSc hons           |
|     |                     | Economics    | 016         | Biochemistry and postgraduate  |
|     |                     |              |             | students of MSc home science   |
| 2.  | Assistant Professor | Daulat Ram   | July2017-   | Teaching undergraduate         |
|     |                     | College      | present     | students of BSc hons           |
|     |                     |              |             | Biochemistry and research work |
|     |                     |              |             | and training in Zebrafish      |

## **Administrative Assignments**

| Name of Institute | Designation | Status    | Time period  | Experience                   |
|-------------------|-------------|-----------|--------------|------------------------------|
| Daulat Ram        | Assistant   | completed | 2018,June    | Worked in help desk during   |
| College           | Professor   |           |              | admissions                   |
| Daulat Ram        | Assistant   | Completed | 2018-2020    | Member of Eco club           |
| College           | professor   | _         |              |                              |
| Daulat Ram        | Assistant   | ongoing   | 2020-present | Member of students amenities |

| College    | Professor |         |              |                         |
|------------|-----------|---------|--------------|-------------------------|
| Daulat Ram | Assistant | ongoing | 2020-present | Ranking work of college |
| College    | Professor |         |              |                         |
| Daulat Ram | Assistant | ongoing | 2021-present | College website work    |
| college    | Professor |         |              |                         |

### Areas of Interest in Teaching:

Hormones biochemistry, Human physiology, Bioinformatics, Nutritional Biochemistry, Infectious diseases, Genetics, Proteins and enzymes, biomolecular techniques

## Subjects Taught

| S.N | Course           | Subject Taught            | Semester   | Year            |
|-----|------------------|---------------------------|------------|-----------------|
| О   |                  |                           |            |                 |
| 1.  | BSc Hons         | Hormones biochemistry,    | III and IV | 2017,2018,2019, |
|     | biochemistry     | Human physiology,         |            | 2020,2021,2022  |
|     |                  | Bioinformatics, tools and |            |                 |
|     |                  | techniques                |            |                 |
| 2.  | BSc Hons         | Nutritional Biochemistry, | V and VI   | 2017,2018,2019, |
|     | biochemistry     | Infectious diseases       |            | 2020,2021,2022  |
| 3.  | BSc Hons         | Genetics                  | V          | 2017,2018       |
|     | biochemistry     |                           |            |                 |
| 4.  | BSc Hons Botany, | Proteins and Enzymes,     | III        | 2019,2020,2022  |
|     | Zoology          | Biochemical correlation   |            |                 |
|     |                  | of diseases, tootl and    |            |                 |
|     |                  | techniques                |            |                 |

**Publications:** 

#### **Book Chapters/Articles**

| S.No | Citation  | Publisher | Date of               | Authored/Edited  | ISBN No                              |
|------|---|-----------|-----------------------|--|--------------------------------------|
|      |   |           | publishing(D          |  |                                      |
|      |   |           | DMMYY0                |  |                                      |
| 1.   | Genome<br>Engineering<br>via CRISPR-<br>Cas9 Systems<br>1st edition | Elsevier  | 21st February<br>2020 | Chapter 17: Functional understanding of<br>CRISPR interference: its advantages and<br>limitations for gene silencing in bacteria<br>Ajitesh Lunge, Eira Choudhary, Rishabh<br>Sharma, <b>Radhika Gupta</b> and Nisheeth<br>Agarwal | Paperback<br>ISBN: 9780<br>128181409 |

**Research Publications:** 

#### International

| S.No | Citation   | Date of    | Impact | UGC     | Scopus  | ISSN         | citation |
|------|--|------------|--------|---------|---------|--------------|----------|
|      |  | Publishing | Factor | Care    | Inexed  | No           |          |
|      |  |            |        | List    | Journal |              |          |
|      |  |            |        | Journal | Yes/No  |              |          |
|      |  |            |        | Yes/No  |         |              |          |
| 1.   | Requirement of the mymA operon for appropriate cell wall ultrastructure and persistence of | June 2005  | 2.6    | yes     | yes     | 1098-<br>553 | 109      |
|      | Mycobacterium tuberculosis in the spleens of guinea  |            |        |         |         |              |          |

|         | 1   | T         | 1        |       | П     |           |          |
|---------|---|-----------|----------|-------|-------|-----------|----------|
|         | pigs. Singh A, Gupta R, Vishwakarma RA, Narayanan PR, Paramasivan CN, Ramanathan VD,                      |           |          |       |       |           |          |
|         | Tyagi AK. J Bacteriol. 2005 Jun; 187 (12):4173-86.2   |           |          |       |       |           |          |
|         | Journal of Bacteriology   |           |          |       |       |           |          |
| 2.      | Disruption of mptpB impairs the ability of  | November2 | 5.06     | yes   | yes   | 1365-     | 177      |
| 2.      | Mycobacterium tuberculosis to survive in guinea   |           | 3.00     | yes   | yes   |           | 1//      |
|         | pigs. Singh R, Rao V, Shakila H, Gupta R, KheraA,   | 003       |          |       |       | 295       |          |
|         | Dhar N, Singh A, Koul A, Singh Y, Naseema   |           |          |       |       |           |          |
|         | M, Narayanan PR, Paramasivan CN, Ramanathan   |           |          |       |       |           |          |
| 2       | VD, Tyagi AK. Mol Microbiol. 2003 Nov50(3)751 Alahari A, Alibaud L, Trivelli X, Gupta R,                  | 2000      | 5.06     |       |       | 1365- 295 | 38       |
| 3.      | Lamichchane G, Reynolds RC, Bishai WR,  | 2009      | 5.06     | yes   | yes   | 1303- 293 | 30       |
|         | Guerardel Y and Kremer L. (2009) Mycolic  |           |          |       |       |           |          |
|         | acidmethyltransferase, MmaA4, is necessary for  |           |          |       |       |           |          |
|         | antitubercular activity of thiacetazone in  |           |          |       |       |           |          |
|         | Mycobacterium tuberculosis. Molecular   |           |          |       |       |           |          |
| _       | Microbiology 71(5)1263-772  | 2000      | 10.5     |       |       | 4550 445  | 121      |
| 4.      | Arora P, Goyal A, Natarajan VT, Rajakumara E, Verma P, Gupta R, Yousuf M, Trivedi OA,                     | 2009      | 12.7     | yes   | yes   | 1552- 445 | 121      |
|         | 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)1662  |           |          |       |       |           |          |
| 5.      | Agarwal N, Lamichhane G, Gupta R, Nolan S and   | 2009      | 38       | yes   | yes   | 1552- 445 | 222      |
|         | Bishai WR. (2009) Cyclic AMP intoxication of macrophages by a <i>Mycobacterium tuberculosis</i>           |           |          |       | 1 -   |           |          |
|         | adenylate cyclase. <i>Nature</i> 460(7251):98-102   |           |          |       |       |           |          |
| 6.      | Khare G, Gupta V, Gupta R, Gupta R, Bhat R and  | 2009      | 3.2      | MAG   | VAC   | 1932-     | 20       |
| 0.      | Tyagi AK. (2009) Dissecting the role of critical  | 2009      | 3.2      | yes   | yes   | 6208      |          |
|         | residues and substrate preference of a fatty acyl-CoA   |           |          |       |       |           |          |
|         | synthetase (FadD13) of Mycobacterium tuberculosis.  |           |          |       |       |           |          |
|         | <i>PLoS ONE</i> ;4(12):e8387.   |           |          |       |       |           |          |
| 7.      | Gupta R, Lavollay M, Mainardi JL, Arthur M, Bishai  | 2010      | 30.6     | yes   | yes   | 1078- 895 | 264      |
| ' '     | WR and Lamichhane G. (2010) The Mycobacterium   | 2010      | 30.0     | yes   | y C 5 |           |          |
|         | tuberculosis gene, ldtMt2, encodes a non-classical  |           |          |       |       |           |          |
|         | transpeptidase required for virulence and resistance to   |           |          |       |       |           |          |
| 0       | amoxicillin. Nature Medicine (4):466-9. 30.6  Converse PJ, Eisenach KD, Theus SA, Nuermberger             | 2010      | 2.22     |       |       | 1932-     | 15       |
| 8.      | EL, Tyagi S, Ly LH, Geiman DE, Guo H, Nolan ST,   | 2010      | 3.23     | yes   | yes   | 6208      | 15       |
|         | Akar NC, Klinkenberg LG, Gupta R, Lun S,  |           |          |       |       | 0200      |          |
|         | 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.      |           |          | 1     |       |           |          |
| 9.      | Maiga M, Agarwal N, Ammerman NC, Gupta R, Guo   | 2012      | 3.23     | NO.C  | NOC   | 1932-     | 66       |
| 7.      | H, Maiga MC, Lun S and Bishai WR. (2012)  | 2012      | 3.23     | yes   | yes   | 6208      |          |
|         | Successful shortening of tuberculosis treatment using   |           |          | 1     |       |           |          |
|         | adjuvant host-directed therapy with FDA-approved  |           |          |       |       |           |          |
|         | phosphodiesterase inhibitors. PLoS One  |           |          |       |       |           |          |
| 10      | 2012;7(2):e30749.  Gupta R*, Erdemli SB*, Lamichhane G, Bishai WR,  | 2012      |          |       | +     | 0969-     | 98       |
| 10.     | Amzel LM and Bianchet MA. (2012) Targeting the  | 2012      | 5        | yes   | yes   | 2126      | 30       |
|         | cell wall of Mycobacterium tuberculosis: structure  |           |          |       |       | 2120      |          |
|         | and mechanism of L,D-transpeptidase 2. Structure  |           |          |       |       |           |          |
|         | 5;20(12):2103-15  |           |          |       |       | 00-0      | 10       |
| 11.     | Shukla J, Gupta R, Thakur KG, Gokhale R and Gopal   | 2014      | 2.6      | yes   | yes   | 2059-     | 46       |
|         | B. (2014) Structural basis for the redox sensitivity of the Mycobacterium tuberculosis SigK-RskA σ-anti-σ |           |          |       | 1     | 7983      |          |
|         | complex. Acta Crystallogr D Biol Crystallogr. 70(Pt   |           |          | 1     |       |           |          |
|         | 4):1026-36. 2.5   |           | <u> </u> |       |       |           |          |
| 12.     | Srivastava S, Chaudhary S, Thukral L, Shi C, Gupta  | 2015      | 5.3      | yes   | yes   | 2049-     | 24       |
|         | RD, Gupta R, Priyadarshan K, Vats A, Haque AS,  |           | 1        | " - " | 1,72  | 482       |          |
|         | 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.   |           |          | 1     |       |           |          |
| <u></u> | 17;22(12):1577-87.  |           |          |       |       |           | <u> </u> |
|         | <u> </u>  |           | •        | •     | •     |           | •        |

| 13. | The unfoldase ClpC1 of Mycobacterium tuberculosis regulates the expression of a distinct subset of proteins having intrinsically disordered termini.  Lunge A, Gupta R, Choudhary E, Agarwal N.  J Biol Chem. 2020 Jul 10;295(28):9455-9473 | 2020 | 4.01 | yes | yes | 0021-<br>9258 | 7 |
|-----|---|------|------|-----|-----|---------------|---|
| 14  | History, evolution and classification of CRISPR-Cas associated systems.  Agarwal N, Gupta R. Prog Mol Biol Transl Sci. 2021;179:11-76. doi: 10.1016/bs.pmbts.2020.12.012. Epub 2021 Feb 9. PMID: 33785174                                   | 2021 | 4.07 | yes | yes | 1878-<br>0814 | 2 |
| 15  | Zebrafish: A Versatile Learning Tool<br>Padmshree Mudgal,Chitra Basin,Adita Joshi, Radhika<br>Gupta<br>General Article Volume 26 Issue 11 November pp<br>1499-1521  | 2021 | 1    | yes | yes |               |   |

#### **National**

| s.no | Citation  | Date of<br>Publishing | Impact<br>Factor | UGC<br>Care<br>List<br>Journal<br>Yes/No | Scopus<br>Inexed<br>Journal<br>Yes/No | ISSN<br>No    |
|------|---|-----------------------|------------------|--|---------------------------------------|---------------|
| 1.   | POLLUTION CONTROLLING ABILITY<br>OF PLANT SPECIES GROWING ON<br>COLLEGE CAMPUS IN DELHI, INDIA<br>BABBAR SIMRAN, MANISHA GUPTA,<br>NEERAJ DOHARE, ANITA GOEL,<br>RADHIKA GUPTA AND SARITA NANDA,<br>Vol 38, November Suppl Issue; Page No.(23-<br>29)         | November 2019         | 0.4              | yes                                      | yes                                   | 0257-<br>8050 |
| 2.   | POLLUTION CONTROLLING ABILITY OF INDIGENOUS PLANT SPECIES GROWING AROUND DRAIN IN DELHI MANISHA GUPTA, BABBAR, SIMRAN, GOEL ANITA, GUPTA RADHIKA, DOHARE NEERAJ AND NANDA SARITA Vol 38, November Suppl Issue; Page No.(29- 35)                               | November 2019         | 0.4              | yes                                      | yes                                   | 0257-<br>8050 |
| 3.   | Gupta R, Ranjan S, Yadav A, Verma B,<br>Malhotra K, Madan M, Chopra O, Jain S,<br>Gupta S, Joshi A, Bhasin C, Mudgal P. Toxic<br>Effects of Food Colorants Erythrosine and<br>Tartrazine on Zebrafish EmbryoDevelopment.<br>Curr Res Nutr Food Sci 2019; 7(3) | December 2019         | 0.5              | yes                                      | yes                                   | 2347-<br>467X |

## **Conference Attended and Paper presentation**

| s.no | Type of    | Name of Event                        | Venue of       | Date of          | Attended | poster | No of   |
|------|------------|--------------------------------------|----------------|------------------|----------|--------|---------|
|      | Event      |                                      | conference     | conferenc        |          | presen | papers  |
|      |            |                                      |                | e(Start          |          | ted    | present |
|      |            |                                      |                | date – End       |          |        | ed      |
|      |            |                                      |                | Date)            |          |        |         |
| 1.   | conference | National science                     | INSA, Delhi    | 28 <sup>th</sup> | yes      | yes    | 1       |
|      |            | day                                  |                | February         |          |        |         |
|      |            |                                      |                | 2018             |          |        |         |
| 2.   | conference | International Conference             | Shivaji        | 12 <sup>th</sup> | yes      | yes    | 3       |
|      |            | on "Frontiers in<br>Biochemistry and | college, Delhi | February         |          |        |         |

|    |            | Biotechnology: Strategies<br>to Combat Human<br>Diseases"  |   | 2020   |     |     |    |
|----|------------|--|---|--|-----|-----|----|
| 3. | conference | Global bioIndia submit   | Aerocity, Delhi                               | 21 <sup>st</sup><br>November<br>2019                                 | yes | no  | no |
| 4. | conference | International Summit<br>on Women in STEM<br>"Visualizing the Future:<br>New Skylines"  | India Habitat<br>center, New Delhi            | 23 <sup>rd</sup><br>January  | yes | no  | no |
| 5  | conference | International conference<br>on recent trends in drug<br>discovery and<br>development organized<br>by Maitryi college, DU,<br>on.                           | Online platform                               | October 8 th<br>and 9 <sup>th</sup> 2021                             | yes | yes | 1  |
| 6  | seminar    | National Seminar on<br>Vishva Guru Bharat,<br>organized by Rajguru<br>college  | Patel chest<br>institute, Delhi<br>University | 2022   | yes | no  |    |
| 7  | conference | Recent Advancements<br>in Chemical Sciences:<br>Health, Environment<br>and Society" organized<br>by the Department of<br>Chemistry, Deshbandh<br>u College | Online platform                               | April 4 and<br>5 <sup>th</sup> 8th and 9 <sup>th</sup><br>April 2022 | yes | Yes | 1  |

# Resource Person (Conference/seminar/ workshop/training programme/ educational trips)

| S.N | Type of  | Name of  | Venu   | Date of   | State your role:                       | Duration       | No of                        |
|-----|----------|--|--|---|--|----------------|------------------------------|
| 0   | Event    | Event  | е  | Event<br>(Start<br>Date- End                          | Convener/Membe r organizing committee/ | of<br>Activity | participant in the programme |
|     |          |  |  | Date)   | Speaker/<br>Coordinator                |                |                              |
| 1.  | National | Inspire camp   | Daular<br>Ram<br>college   | 17 <sup>th</sup> to 21 <sup>st</sup><br>December 2018 | Organising team                        | 5 days         | 150 students (class<br>XIth) |
| 2.  | National | understanding Zebrafish for undergraduate students of BSc (biochemistry)   | Daulat<br>Ram<br>College   | June 2018   | Resource person                        | 30 days        | 15 undergraduate<br>students |
| 3   | national | A Six -day online<br>training<br>workshop on<br>animal models on<br>'Learn and<br>explore with<br>Animal Models, | Zebraf ish Lab Facilit y, Daulat Ram Colleg e, Univer sity of Delhi under the aegis of IQAC, | 3rd -8th<br>January, 2022                             | Resource person                        | 6 days         | 100                          |

#### **Awards Won**

| S.N | Name of | Awarding | Government/          | Recognitio | Date of   | Type of  |
|-----|---------|----------|----------------------|------------|-----------|----------|
| О   | Award   | Agency   | NGO/                 | n area     | award     | Honor    |
|     |         |          | International/Privat |            | (DDMMY    | received |
|     |         |          | e                    |            | Y)        |          |
| 1.  | CSIRJRF | CSIR     | Government           | Life       | June 2004 |          |
|     | and SRF |          |                      | sciences   |           |          |

## **Membership of Professional Bodies**

| S.No | Type of Membership | Organisation | Year of<br>Membership(Start |
|------|--------------------|--------------|-----------------------------|
|      |                    |              | Date)                       |
| 1.   | Life time          | SBC          | December,2004               |