




Faculty Details Proforma

Title	Professor	First Name	PADMSHREE	Last Name	MUDGAL	Photograph
Designation	Professor					
Address	Biochemistry Department, Daulat Ram College, 4 Patel Marg , Delhi-110007					
Email- ID	Padmashree.m@gmail.com , pmudgal@dr.du.ac.in					
Web Page						

Educational Qualification Ph.D.

Degree	Institution	Year
B Sc.(Hons) Chemistry	Miranda House University of Delhi	1982
MSc. Biochemistry	Post Graduate Institute of Medical Education & Research, Chandigarh	1984
Ph.D.	Natl. Dairy Res.Inst. Kurukshetra Univ., Karnal (Haryana)	1990

Career Profile

Name of University/College/Institute/Organizat ion	Designation	Status	Pay Scale/Consolidated salary	Program me	Course/Subject	Work equivalent to Ass. Professor or higher	From	to
1. Daulat Ram College , University of Delhi	Professor	Permanent	14	BSc.(Hons) Biochemistry	Biochemistry	yes	6th Nov 2020	Till date
2. Daulat Ram College , University of Delhi	Associate professor (13 A)	Permanent	13 A	BSc.(Hons) Biochemistry	Biochemistry	yes	28th August 2006	6th Nov 2020
3. Daulat Ram College , University of Delhi	Assistant professor	Permanent	10	BSc.(Hons) Biochemistry	Biochemistry	yes	28th August 1989	28th August 2006

Administrative Assignments

Name of Organization	Designation	Date From (YY-MM-DD)	Date To (YY-MM-DD)
1. Daulat Ram College	IQAC Convener	2024 onwards	
2. Delhi University	Nodal Officer North Cluster Knowledge network, DU	July 2022 onwards	

3. Bihar State University Service Commission.	Subject Expert , Asst. Professor selection Committee	20 Aug 2024	22 Aug 2024
4. Daulat Ram College	Member Selection Committee , for appointment of Asst. Professor in Biochemistry Department	Aug 21	Aug 2021
5. Daulat Ram College	Teacher-in-charge	2014-15, 2018-19, 2021-22	
6. Daulat Ram College	Coordinator Star Innovation Projects, University of Delhi	2016	2019
7. Daulat Ram College	Dy. Superintendent Semester Examinations Dec.2017	Dec. 2017	Dec, 2017
8. Daulat Ram College	Convener Development and Maintenance Committee (2017-18)	2017	2018
9. Daulat Ram College	Dy. Superintendent Semester Practical Examinations (April- May 2018)	April 2018	May 2018
10. Daulat Ram College	Coordinator, Star College Project , DBT	2018	2019
11. Daulat Ram College	Coordinator AECC / SEC semester mode University examinations, Category A.	May 2019	June 2019
12. Daulat Ram College	Convener, Hostel Committee	2013	2014
13. Daulat Ram College	Convenor, TPC	2013	2014
13. Daulat Ram College	Convener, Admission Committee	2010	2010

Areas of Interest/Specialization

Biochemistry: Proteins, Membrane Biology, Cell communication, Hormone Biochemistry, Human Physiology, Zebrafish model organism: Toxicology, Behavioural studies, Regeneration

Subjects Taught
BSc. (Hons) Biochemistry: Proteins, Carbohydrate Metabolism, Bioenergetics, Membrane Biology, Hormone Biochemistry, Molecular Cell Biology, Plant Biochemistry, Human Physiology SEC: Drosophila and Zebrafish Model Organisms in Biological Studies, Public Health Biology
Research Guidance
<p>1. Ph.D. (Co-guide) Name of Scholar: Ms. Garima Jindal, Title: “Phthalate-induced myelin sheath degeneration and axonal dysfunction and its role in the altered behavior in zebra fish larvae” Subject: Ph.D. (Toxicology) Jamia Hamdard, New Delhi 08/06/21</p> <p>2. P.G. Dissertation 2018 Ms. Manisha “To develop Zn induced hepatotoxicity model in zebrafish embryo ” M.Sc. Biochemistry, Amity school of applied sciences, Amity University Haryana June 2018</p> <p>3. P.G. Dissertation 2018 Ms Karamwati “To study the effect of curcumin on angiogenesis in developing</p>

zebrafish embryos” M.Sc. Biochemistry, Amity school of applied sciences, Amity University Haryana June 2018

4. P.G. Dissertation 2017 Ms Charu Mittal “To study the metabolic impact of food emulsifiers in zebra fish developing embryos” M.Sc. Biochemistry, Amity school of applied sciences, Amity University Haryana June 2017

Publications Profile

1. Mudgal P., Dhamija N., Goel A. (2024). *Drosophila and Zebrafish Model organism in Biological studies, Practical Lab Manual*. Book Age Publications. ISBN: 978-93-93904-45-4
2. 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>
3. Mudgal P., Bhasin C., Joshi A., Gupta R. (2021) Zebrafish: A Versatile Learning Tool. *Resonance*. Nov 2021; 26(11): 1483-1601
4. Wardhan R, Mudgal P. Understanding the predisposing risk factors of young suicide. *Int J ResMed Sci* 2020; 8: xxx-xx.
5. Mudgal P, Wardhan R. The increased risk of elderly population in India in COVID-19 pandemic. *Int J Health Sci Res*. 2020; 10(10):166-175.
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. (2019) Toxic Effects of Food Colorants Erythrosine and Tartrazine on Zebrafish Embryo Development. *Curr. Res Nutr. Food Sci* 2019; 7(3). <https://bit.ly/2OFNYLM>
7. Wardhan R., and Mudgal P. (2017) **Textbook of Membrane Biology**. Springer Singapore.
8. DOI: 10.1007/978-981-10-7101-0
 - i. a. eBook ISBN(E): 978-981-10-7101-0
 - ii. b. Hardcover ISBN (P): 978-981-10-7100-3
9. Khetrpal M., Mudgal P., Lata V. (2017) Bio-detergent from *brassica juncea* (mustard) seedoil and study of its quality parameters & environmental indexes. In. *J. App. Nat. Sci. (IJANS)*,ISSN (P): 2319-4014; ISSN (E): 2319-4022, 6(3), 35 - 40
10. Bhasin C., Mudgal P., et.al. 2016. Zebrafish Early Stage Developmental Defects as Indicator of Site Specific Water Composition of River Yamuna. *DU Journal of Undergraduate Research and Innovation*. Volume 2, Issue 1pp 40 - 45, 2016 <http://journals.du.ac.in/ugresearch>
11. Khetrpal M., Mudgal P. et al. 2016. One Pot Synthesis of Green Detergents from BioWastes. *DU Journal of Undergraduate Research and Innovation* Volume 2, Issue 1pp 92 - 98, 2016
12. Comparative study of detergents in India-A step towards more sustainable laundry. M. Khetrpal, Mudgal P., Lata, Sagrika, Ayushi, Vishu, Vaishali, Ushma, Deepika and Charu. *DU Journal of Undergraduate Research and Innovation*. Feb. 2015 Vol. I, Issue 1, 163-172 <http://journals.du.ac.in/ugresearch>
13. M. Khetrpal, Mudgal P., Lata, Ayushi, Deepika and Charu. Synthesis of detergents from Rice Bran oil and study of its quality parameters. *International Journal of General Engineering and Technology (IJGET)*. Vol. 3: Issue 6, Nov 2014, 1-6
- 14.
15. Casein Kinase II activity of Buffalo sperm chromatin. Mudgal P., Anand S. R. *Mol. Reprod Dev.*1998 50: 178-184.
16. Histone Kinase activity of Buffalo sperm chromatin. Mudgal P., Varshney GC, Anand SR *Arch. Androl.* 1997, 38:191-199

Conference Organization/Presentation

1. Poster Presented at “The 9th Zebrafish Disease Models Conference”. Oct. 4-7, 2016. Singapore:
Mudgal P. Zebrafish as a bio-sensor to assess the impact of water pollution on human health.
2. Poster presented at “International Conference on green chemistry in Environmental Sustainability and Chemical Education. (ICGC 2016), 17th – 18th Nov. 2016. Daulat ram College, Delhi.
 - a. Bhasin C., Mudgal P., et.al. Zebrafish as an early embryonic development model to assess specific and combined health impact of heavy metal contamination in river Yamuna in Delhi NCT region.
 - b. Madhu, Bhasin C., Mudgal P., et.al. Zebrafish, as an early embryonic development model to assess the health impact of pesticide contamination in river Yamuna in Delhi NCT region.
3. Poster presented and abstract printed in proceedings of “International Conference in Frontiers in Biochemistry and Biotechnology: Strategies to combat human diseases”, 12th -13th February, 2020 at Shivaji College, University of Delhi.
 - a. Kaur M., Gupta R., Bhasin C., Joshi A. and Mudgal P. Study of anxiolytic activity of Ayurvedic drugs using zebrafish larval stress response assays.
 - b. Mall P., Saja A., Kathuria S., Bhasin C., Joshi A., Gupta R., Mudgal P. To assess the impact of food additives on learning and memory in zebrafish model.
 - c. Gupta R., Kaur M., Joshi A., Bhasin C. and Mudgal P. Erythrosine induces oxidative damage in zebrafish.
4. Keynote speaker at " 2nd Global summit on Food science and nutrition 2021" 29-30th of October in Vienna, Austria, on “Assessment of Health Impact of food colorants using Zebra fish model system”
5. **Invited talk** on "ZEBRAFISH MODEL SYSTEM: A TOOL FOR DRUG DISCOVERY" 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, 8-9 Oct 2021
6. Chaired a Scientific session in 4th Asian Congress for Alternatives to Animal Experiments (4ACAAE) and the 7th Annual Meeting of the Society for Alternative Animal Experiments- India (SAAE-I) being hosted at Jamia Hamdard, New Delhi on December 12-14, 2024.

Research Projects (Major Grants/Research Collaboration)

1. Innovation Project, Delhi University. (2013-15): How safe are our Detergents: A comparative Study and development of Biodetergents. (DR-204) (5.5 lakhs)
2. Innovation Projects; University of Delhi. (2015-16): Zebra fish as a biosensor to assess Yamuna River water quality in Delhi NCT region. (DRC 301) (7.5 lakhs).
3. Star Innovation Project, CIC, Delhi University. (2016-19): Evaluating the effects of common food additives on vertebrate development and organogenesis using zebrafish as a model system (23 lakhs).
4. INSPIRE, DST (Ref. no. DST/INSPIRE/01/2018/00051) Internship Science Camp as Coordinator and Mentor. (9 LAKHS) 150 school students participated

5. Navdhara project 2022: To Screen and Assess the Efficacy of Traditional Indian medicine in the Management and Treatment of Hypothyroidism using Zebrafish Model system (45, 000/)
6. Skill development Center Grant from Skill Enhancement Committee, DU to set up Drosophila and Zebrafish model organisms Skill development Center in DRC in 2024 (10 lakhs).

Awards and Distinctions

Name of Awarding Body	Name of Award/Honor	Date	Level
1. Daulat Ram College Trust	Shri Mahendranath Gupta Memorial prize , Co-recipient. Certificate and cash incentive For Exemplary performance & bringing laurels to College	2003	College
2. Delhi University	Best Innovative Idea,	2015	University
3. Delhi University	Teaching Excellence Award for Innovation	2015	University
4. Delhi University	Best Research Outcome award for Research poster display at Delhi University Convocation 2016, for the Innovation project “Zebra Fish as a Biosensor for assessing Yamuna river water quality in Delhi NCT region”	2016	University
5. CPACE	Dr. Sarvepalli Radhakrishnan Best Teacher Award in 2021 Biochemistry by Center for professional advancement.	2021	National

Association with Professional Bodies

1. Member Institutional Ethics Committee (IEC) and College Research and Innovation Cell (CRIC), Shivaji College, University of Delhi. (2023-2025)
2. Senior Teacher representative Member Governing Body, Daulat Ram College 2024-25.

Other Activities

1. Established **Zebrafish Lab Facility** in Daulat Ram College in Oct 2015, in collaboration with CSIR-IGIB, Mathura Road, Delhi, and Sansriti Foundation Delhi. The facility has been funded by Star Innovation projects DU, Star College project DBT, Govt. of India, Innovation projects DU and Skill enhancement Courses committee, DU. It was developed with the aim of providing an alternative **in vivo non – invasive model system for science education, teaching and research.**

The facility provides training in zebrafish model system to faculty and students. Till date ~ **200 faculty members and more than 2000 Masters’ and undergraduate students** from various science streams from different Delhi NCR Universities have participated in various workshops conducted by the zebrafish lab facility.

The facility also hosts summer internship program for students (under-graduate and post Graduate) to get hands on training and research experience.

Zebrafish lab facility also serves as a resource center to provide zebrafish and embryos to other Colleges / departments and research institutes to support teaching and lab practicals. The facility is also available for collaborative projects with faculty members of other colleges and Institutes.

The Zebrafish Lab Facility is now a part of **Skill Development Center of DRC**, established in 2024, which successfully runs the SEC course: Drosophila and Zebrafish model organisms in Biological studies under the new NEP curriculum.

2. **Creation of ICT mediated Teaching pedagogy and content and development**

Category	Sub Category	Credits	Name of Module	Subject	Organization which it was Developed	Year	Level Index
2. Skill enhancement Course: You tube video	Zebrafish model System	2	Drosophila and Zebrafish model Organism in Biological studies	SEC course	You tube: https://youtu.be/puOZFBTwegoI?feature=shared	Aug 2024	For General Public awareness, (National)
3. You tube video Contributed as Expert in You tube Documentaries on Yamuna River Pollution			Yamuna River Pollution	Environmental Science/ Public Health	You Tube : https://youtu.be/-TUmsU12cB8	25/ 6/24	For General Public awareness, (National)
4. You tube video: Biochemistry Beyond the Classes	Separation of plant pigments by paper chromatography		Separation of plant pigments by paper chromatography	Biochemistry: Membrane Biology	https://youtu.be/HcqsX-7nrh8	2022	undergraduate
5. You tube video: Biochemistry Beyond the Classes	CMC made simple with home experiments		CMC made simple with home experiments	Biochemistry: Membrane Biology	https://youtu.be/Rj2asMqhIaI	2022	undergraduate
6. You tube video: Biochemistry Beyond the Classes	Permeability of cell membrane		Permeability of cell membrane	Biochemistry: Membrane Biology	https://youtu.be/tKEu3AmXKuM	2022	undergraduate

3. Invited Lectures/Resource Person/ paper presentation in seminars/ Workshops organized

Title of the invited lecture delivered/Paper presented/ workshop organized	Details of Conference / Seminar/FDP and Organising Institution	Category /Type of Event	Date of Presentation (yy-mm-dd)	Duration (in Mins.)
Invited lecture on :Zebrafish Model System	Webinar Talk Organized by Department of Biochemistry, Shivaji College, University of Delhi https://us02web.zoom.us/j/83281224416?pwd=dVhscVZGUWFQaXhlZjhNVGZjeXlZZz09	International webinar	May 8, 2020 03:00 PM India	1.5 hrs
Invited talk on ‘Zebrafish Model System’	Invited talk at Amity Institute of Biotechnology https://web.microsoftstream.com/video/41645c4e-f15a-4326-b33f-29e924559315	Invited webinar at Amity University	22 Oct, 20 20 at 3.15 pm	1.5 hrs
Keynote speaker at " 2nd Global summit on Food science and nutrition 2021" 29-30th of October in Vienna, Austria, on “Assessment of Health Impact of food colorants using Zebra fish model system”	2nd Global summit on Food science and nutrition 2021" 29-30th of October in Vienna, Austria,	International Conference	29-30th of October 2021	1.5 hrs
Invited talk on "Zebrafish - An ideal Model Organism for Human Research”	‘Skill Enhancement Workshop on Model Organism and Visual Experimentation - Zebrafish and JoVE’, organized by CHRYSALIS, The Biological Science Society, Sri Venkateswara College, University of Delhi.	Invited talk	21st January, 2022	2 hrs
Invited talk on "ZEBRAFISH MODEL SYSTEM: A TOOL FOR DRUG DISCOVERY" in International E-Conference on “Recent Trends in Drug Discovery and Development”	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	International E-Conference	8-9Oct 2021	1.5 hrs
Invited talk on " Water Pollution and its Health Impact	International workshop on Public Health. Organized by Daulat Ram College and Delhi School of Public Health DU	International workshop	8-9Oct 217th - 18th Jan,23	1.5 hrs
Convenor and Resource person in Capacity Building Five day workshop on Zebrafish Model System	Capacity Building 5 days workshop on Zebrafish Model System 11 students of DRC from 22nd – 26th July2024.	Capacity building workshop	22nd – 26th July2024	5 days
Convenor and Resource person in Capacity Building One day workshop on Zebrafish Model organism	Capacity Building One day workshop on Zebrafish Model System for 2 faculty and 14 students of Noida Institute of Engineering and Technology (Pharmacy Institute) Noida, on 28th Sept. 2024	Capacity building workshop	28th Sept. 2024	1 day
Convenor and Resource person in Capacity Building One day workshop on Drosophila and Zebrafish Model organism	Capacity Building One day workshop on Drosophila and Zebrafish Model organisms for 2 faculty and 14 students of Desh Bandhu College on 12th Nov. 2024	Capacity building workshop	12th Nov. 2024	1 day
Convenor and Resource person in Capacity Building One day workshop on Drosophila and Zebrafish Model organism	Capacity Building One day workshop on Drosophila and Zebrafish Model organisms for 10 faculty and 20 students of Shri Raj Guru College of Applied Sciences on 17th Nov. 2024	Capacity building workshop	17th Nov. 2024	1 day

Convenor and Resource person in Hands on Experience with Zebrafish under Capacity Building Training Programme on Research Methodologies for Working with Model Organisms	Hands on Experience with Zebrafish under Capacity Building Training Programme on Research Methodologies for Working with Model Organisms , organized by Department of Zoology, Miranda House, University of Delhi on April 18th 2024.	Capacity building workshop	18th April 2024	4 hours
Convenor and Resource person in Capacity Building One day workshop on Zebrafish Model organism	Capacity Building One day workshop on Zebrafish Model System for 10 faculty and 20 students of Noida Institute of Engineering and Technology (Pharmacy Institute) Noida, organized by Zebrafish Lab facility, DRC	Capacity building workshop	28 th September, 2024	1 day
Convenor and Resource person in Capacity Building One day workshop on Drosophila and Zebrafish Model organism	Capacity Building One day workshop on Drosophila and Zebrafish Model organism for 2 faculty and 25 students of Desh Bandhu College, University of Delhi, organized by Biochemistry Department , DRC	Capacity building workshop	12/11/24	1 day
Convenor and Resource person in Capacity Building One day workshop on Zebrafish Model System	Capacity Building One day workshop on Zebrafish Model System for 10 faculty and 20 students of Noida Institute of Engineering and Technology (Pharmacy Institute) Noida, on 1st March 2024, organized by Zebrafish Lab facility, DRC	Capacity building workshop	1/3/24	1 day
Convenor and Resource person in Capacity Building One day workshop on Zebrafish Model System	Capacity Building One day workshop on Zebrafish Model System for 6 faculty and 20 students of Noida Institute of Engineering and Technology (Pharmacy Institute) Noida, on 18th Oct 2023. organized by Zebrafish Lab facility, DRC	Capacity building workshop	18th Oct 2023	1 day
Convenor and Resource person in Capacity Building One day workshop on Zebrafish Model System	Capacity Building One day workshop on Zebrafish Model System for faculty and 30 students of BSc.(H) Biological Sciences SVC College, DU on 7th Nov. 2023., organized by Zebrafish Lab facility, DRC	Capacity building workshop	7th Nov 2023	1 day
Convenor and Resource person in A Six -day online training workshop on animal models on ‘Learn and explore with Animal Models	A Six -day online National training workshop on animal models on ‘ Learn and explore with Animal Models , organized by Zebrafish Lab facility, DRC	6 day online National training workshop	3rd -8th January, 2022	6 days
Convenor and Resource person in Hands on training workshop on “Zebrafish model system”	Hands on training workshop on “Zebrafish model system” was conducted from in Zebrafish lab facility, Daulat Ram College. 15 undergraduate students of Zoology (Hons) I st year Daulat Ram College.	Hands on training workshop	17th Dec – 20th December 2019	4 days
Convenor and Resource person in One day training program on “Zebrafish Husbandry”	One day training program on “Zebrafish Husbandry” for Zoology Hons. Students of Khalsa College, University of Delhi 50 students participated in the workshop, organized by Zebrafish lab facility, DRC	Capacity building workshop	24th September, 2019	1 day
Convenor and Resource person in Summer Internship Program for science undergraduate students of Delhi University from on “Zebra fish Model System” at Zebrafish facility, Daulat Ram College.	Summer Internship Program for science undergraduate students of Delhi University from on “Zebra fish Model System” organized by Zebrafish facility, Daulat Ram College	Summer Internship Program for science undergraduate students	17th June – 17th July 2019,	1 month
Convenor and Resource person in Hands on training workshop on “Drosophila and Zebrafish model systems”	Hands on training workshop on “Drosophila and Zebrafish model systems, organized by Biochemistry and Zoology Department, DRC	Capacity building workshop	28th -31st , 2019	4 days

Coordinator and Resource person in DST- INSPIRE Internship Science Camp	DST- INSPIRE Internship Science Camp, Organized by Daulat Ram College, Coordinator: Dr. Padmshree Mudgal	DST=INSPIRE Internship Science Camp (Ref. no. DST/INSPIRE/01/2018/000517)	17-21st December, 2018	5 days
Convenor and Resource person in One-week workshop on 'Zebrafish as a model system'	One-week workshop on 'Zebrafish as a model system' for science undergraduate students of Delhi University from at Zebrafish facility, Daulat Ram College. 10 students participated.	Capacity building workshop	4th-9th July, 2018	1 week