

CURRICULUM - VITAE

NAME : **Dr. JAI GOPAL SHARMA**

Present Position : **Professor**
Department of Biotechnology
Delhi Technological University
Bawana Road, Delhi 110042
Former Head,
Department of Biotechnology,
(2018-2020)

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Educational Qualifications

Degrees / Fellow	Subject	University	Year
Post-Doctoral Fellow	Environmental Biology	Kyoto University, Japan	2001-03
Ph.D.	Zoology	University of Delhi	2000
M.Sc.	Zoology	Meerut University, U.P.	1993

Job Profile

- **Head**, Department of Biotechnology, Delhi Technological University (January 2018-December 2020).
- **Professor**, Department of Biotechnology, Delhi Technological University since June 2015.
- **Associate Professor**, Department of Biotechnology, Delhi Technological University, Delhi, June 2012 - June 2015.
- **Senior Scientific Officer** (Class One Gazetted Officer) Ministry of Science & Technology, Government of India, October 2006 - June 2012.
- **Senior Research Associate Council of scientific and Industrial Research (CSIR)**, Human Resources Development Group, Govt. of India, Department of Zoology, University of Delhi, June 2003 - June 2006.

Experience

- Teaching and Research Experience: 30 years

Area of Interest

- Water Quality Management, Industrial and Environmental Biotechnology, Aquaculture, Fish Nutrition, Radiation Biology, UV-B Radiation, Aquatic Ecology, Biosensor, Bioremediation, Bioenergy, Microbiology, Water Pollution, Nanobiotechnology, Gene Expression, Water Chemistry, Environmental Impact Assessment, Chromatography, Amino Acids, Fatty Acids, Bio fuel and Medicinal Chemistry of Plants, Yoga.

Post-Doctoral Fellowships

1. Senior Research Associate, Council of Scientific & Industrial Research (CSIR), Human Resources Development Group, Govt. of India, June 2003 - June 2006.
2. Post-Doctoral Fellowship, Kyoto University, Japan, April 2001 - March 2003.

On-going Research Projects

1. “Investigations on Micro-Nano Plastics (MNPs) Fingerprinting in Cruciferous Truck Crops, In silico Analysis, Probabilistic Health Risk Assessment and Their Interactions in *Brassica oleracea* spp.” sponsored by Department of Biotechnology (DBT), Ministry of Science & Technology, Govt. of India, India.
2. “Evaluation of Effect of Macrophytes-Based Feed on The Growth, Gut Physiology, Expression of Specific Genes Involved in the Biosynthesis of DHA & EPA and Production of Quality Freshwater Fishes”, sponsored by Department of Biotechnology (DBT), Ministry of Science & Technology, Govt. of India, India.

Completed Research Projects

S.No.	Funding Agency	Duration	Title of Project
1.	Department of Science and Technology (DST), Ministry of Science and Technology, Government of India.	2020-2023	Integrated farming of <i>Lates calcarifer</i> and <i>Macrobrachium rosenbergii</i> in Aquaponic System: A Sustainable Water Utilization Approach”
2.	Department of Biotechnology (DBT), Ministry of Science & Technology, Govt. of India, India.	2018-2021	Dissemination and demonstration of fish culture technology among Women Self Help Groups in NCR region of Delhi as a self-employment activity
3.	Department of Biotechnology (DBT), Ministry of Science & Technology, Govt. of India, India	2017-2019	Nano-enabled Biosensor for Detection of <i>Neisseria Gonorrhoea</i>
4.	Newton Fund Global Research Partnership (GRP) in Aquaculture: Case for Support (Multi-Country	2016-2019	Development of Alternative Sustainable Fish Feeds to Promote Human Health using Novel Non- Conventional Indigenous

	Project)-Sponsored by BBSRC (United Kingdom) and Department of Biotechnology (DBT), Ministry of Science & Technology, Govt. of India, India		Ingredients
5.	Department of Biotechnology (DBT), Ministry of Science & Technology, Govt. of India, India	2015-2019	Development of Pelleted Diet for <i>Labeo rohita</i> and <i>Clarias batrachus</i> Using <i>Achyranthes aspera</i> and Evaluation of Its Immunostimulatory Properties in Pond Culture System
6.	University Grants Commission (UGC), Govt. of India, India	2013-2018	Simultaneous Degradation of Organochlorine Pesticides by Microbes
7.	Science & Engineering Research Board (SERB), Department of Science & Technology (DST), Ministry of Science & Technology, India.	2017-2019	Toxicity Assessment and Treatment of Pharmaceutical Waste Water by Novel Nano Catalyst Based Advanced Oxidation Method
8.	Department of Science & Technology, (DST), Ministry of Science & Technology, Govt. of India, India	2013-2016	Engineering of acting filament for the development of next generation diagnostic nano-devices

Awards

1. **Commendable research excellence award 2023** by Delhi Technological University, Delhi for seven research papers on 5th September 2024
 - Tiwari, N., Santhiya, D. and Sharma, J.G., 2023. Degradation of polyethylene microplastics through microbial action by a soil isolate of *Brevibacillus brevis*. *Polymer Degradation and Stability*, 215, p.110436.
 - Bansal, M., Santhiya, D. and Sharma, J.G., 2023. Exploring the impacts of HDPE microplastics

on growth and physiological behavior of Brassica juncea (Mustard Plant). Water, Air, & Soil Pollution, 234(8), p.520.

- Puri, P., Singh, R. and Sharma, J., 2023. Micro-/bio-/nano-/syn-encapsulations and co-treatments of bioactive microbial feed supplementation in augmenting finfish health and aquaculture nutrition: a review. Beneficial Microbes, pp.1-22.
 - Puri, P., Sharma, J.G. and Singh, R., 2022. Biotherapeutic microbial supplementation for ameliorating fish health: developing trends in probiotics, prebiotics, and synbiotics use in finfish aquaculture. Animal Health Research Reviews, 23(2), pp.113-135.
 - Priya, Virmani, I., Pragya, Goswami, R.K., Singh, B., Sharma, J.G. and Giri, B., 2023. Role of microbial phytases in improving fish health. Reviews in Aquaculture, 15(4), pp.1480-1500.
 - Singh, M., Sharma, J.G. and Giri, B., 2023. Microbial inoculants alter resilience towards drought stress in wheat plants. Plant Growth Regulation, 101(3), pp.823-843.
 - Singh, M., Sharma, J.G. and Giri, B., 2023. Microbial inoculants improve growth in Zea mays L. under drought stress by up-regulating antioxidant, mineral acquisition, and ultrastructure modulations. Symbiosis, 91(1), pp.55-77.
2. **Commendable research excellence award 2022** by Delhi Technological University, Delhi for five research papers on 6th April 2023
- Kumar, L., Chugh, M., Kumar, S., Kumar, K., Sharma, J. and Bharadvaja, N., 2022. Remediation of petrorefinery wastewater contaminants: A review on physicochemical and bioremediation strategies. Process Safety and Environmental Protection, 159, pp.362-375.
 - Sharma, J., Kumar, N., Mittal, P. and Chakrabarti, R., 2022. Evaluation of UV-B protective properties of leaves and seeds of *Achyranthes aspera* in Asian catfish *Clarias batrachus* (Linn.). Photochemical & Photobiological Sciences, 21(8), pp.1341-1356.
 - Tiwari, N., Bansal, M., Santhiya, D. and Sharma, J.G., 2022. Insights into microbial diversity on plastisphere by multi-omics. Archives of Microbiology, 204(4), p.216.
 - Tiwari, N., Santhiya, D. and Sharma, J.G., 2022. Biodegradation of micro sized nylon 6, 6 using *Brevibacillus brevis* a soil isolate for cleaner ecosystem. Journal of Cleaner Production, 378, p.134457.
 - Chaudhary, N., Verma, D., Sharma, J.G. and Solanki, P.R., 2022. A novel bioinspired carbon quantum dots based optical sensor for ciprofloxacin detection. Materials Letters, 308, p.131090.
3. **Commendable research excellence award 2021** by Delhi Technological University, Delhi for five research papers on 3rd March 2022
- Chaudhry, N., Verma, D., Sharma, J.G. and Solanki, P.R., 2021. A Novel Bioinspired Carbon Quantum Dots based Optical Sensor for Ciprofloxacin Detection. *Materials Letters*, p.131090.
 - Kumar, L., Kaur, R. and Sharma, J., 2021. The efficiency of Zeolites in Water Treatment for Combating Ammonia-An Experimental Study on Yamuna River Water & Treated Sewage Effluents. *Inorganic Chemistry Communications*, p.108978.

- Kumar, G. Sharma, J. G., Goswami, R. K., Shrivastav, A. K., Kumar, N., Chandra, S. and Chakrabarti, R. 2021. The study of effect of vitamin C and *Achyranthes aspera* seeds enriched diets on the growth, biochemical composition, digestive enzyme activities and expressions of genes involved in the biosynthesis of fatty acids in Snow trout *Schizothorax richardsonii* (Gray, 1832). *Journal of Applied Aquaculture*.
- Bansal, M., Santhiya, D. and Sharma, J.G., 2021. Behavioural Mechanisms of Microplastic Pollutants in Marine Ecosystem: Challenges and Remediation Measurements. *Water, Air, & Soil Pollution*, 232(9), pp.1-22.
- Kalsi, A., Celin, S.M., Sharma, S., Sahai, S. and Sharma, J.G., 2021. Bioaugmentation for remediation of octahydro-1, 3, 5, 7-tetranitro-1, 3, 5, 7-tetrazocine (HMX) contaminated soil using clay based bioformulation. *Journal of Hazardous Materials*, p.126575.
- 4. Education Excellence Award 2021 by Dr. Swarn Chawla memorial foundation, Delhi during the World Environment Summit 2021 (1st to 3rd October) organized by ESDA Delhi.
- 5. National Innovative Education Award 2021 by Socrates Social Research University Trust, Constitution Club of India, New Delhi (5th September, 2021)
- 6. **Commendable research excellence award 2020** by Delhi Technological University, Delhi for three research papers on 13th March 2021
- Jai Gopal Sharma, William D. Clark, Avanish Kumar Shrivastav, Ravi Kumar Goswami, Douglas R. Tocher, R. Chakrabarti 2019. Production potential of greater duckweed *Spirodela polyrhiza* (L. Scheilden) and its biochemical composition evaluation. *Aquaculture* (513).
- Jai Gopal Sharma, Neelesh Kumar, Samar Pal Singh, Amarjeet Singh, V. HariKrishna, R.Chakrabarti, 2019. Evaluation of immunostimulatory properties of prickly chaff flower *Achyranthes aspera* in rohu *Labeo rohita* fry in pond conditions. *Aquaculture* 505 (2019) 183–189.
- Tiwari, N., Santhiya, D., & Sharma, J. G., 2020. Microbial remediation of micro-nano plastics: Current knowledge and future trends. *Environmental Pollution*, 265, 115044.
- 7. **National Green Award-2019** by Environment and Social Development Association for outstanding contribution in the field of Environmental Biotechnology in International Conference on “Global Environmental Challenges, Human Health and Sustainable Development” The Convention Centre, Jawaharlal Nehru University, New Delhi, 11th -13th January, 2019.
- 8. **Session’s Best Presentation Award** (Nutrition Session) in the International Conference on Fisheries and Aquaculture 2015, Colombo, Sri Lanka, August 25-26, 2015.
- 9. **Young Scientist Award**, U.P. Council of Science & Technology 2003-2004 (U.P. Government) National Science Day, Cash award of Rs. 25,000/- and Citation February 28, 2004.
- 10. **Young Scientist Award**, Asian Fisheries Society (AFSIB), December 17, 2002.
- 11. **U.P. Government Scholarship** for the Academic Excellence in the Examination, 1983-1984.

Students' Awards

1. **First Prize** to MTech students, Shubhika, Pradeep Patel, at Innovation Showcase (Prototype category) organised by DTU-IIF, DST, IIC DTU.
2. **Second Prize** to MTech students, Shubhika in case study presentation at industry 5.0 green energy and human centric innovation shaping sustainable future 3 day workshop organised by Mechanical engineering department, DTU
3. **Best paper presentation award** to paper entitled “The study of microbial profile in the aquaponic system authored by Mohita Singh, Jai Gopal Sharma and Rina Chakrabarti that was presented under Oral/Poster category at the 14th Fisheries and Aquaculture Forum(14AFAF), held on 12-15 February 2025.
4. **First prize** for presentation to M. Tech student, Subhika, for her work on “Revolutionizing Transportation: The Role of Renewable Fuels and Engine Tribology” in the workshop organized by Mechanical Engineering Department, Delhi Technological University, held on 24 October, 2024.
5. **Second prize for poster presentation** to Ph.D. student, Anisha Kathpalia for her work in the International Conference on strategies for global food and nutritional security, sustainability and wellness (NUTRI-2023) held on December 4-6, 2023.
6. **Best presentation award** to Ph.D. student Meenakshi Dubey for research paper entitled “Identification of genes involved in fruit development/ripening in Capsicum and development of functional markers” in the 2 nd International Conference on Recent Advances in Biotechnology and Nanobiotechnology held on 10-11 February, 2022.
7. **Third Best poster award** to Ph.D. student Neha Tiwari, for Short Invited Lecture on “A study on HDPE plastics degradation using bacterial isolates” in the 26th international conference of International Academy of Physical Sciences held at (Mahatma Gandhi University, Kottayam, Kerala, India) during December 18-20, 2020
8. **Third Best poster award** to Ph.D. student Ms. Neha Tiwari for poster presentation on “Synthesis of HDPE microplastics and study of its impact on microbial growth under in vitro conditions” in First International Online Conference on Blends, Composites, Bio Composites and Nanocomposites (ICNC 2020) 9th 11th October 2020 Kottayam, Kerala, India
9. **Best poster award** to M. Tech student Ms. Aditi Singh for poster presentation on “Green synthesis of extracellular copper and silver nanoparticles from novel bacterial strains *Bacillus oleronius* sp. Ep 1 and *Stenotrophomonas* sp. rt3 for their antibacterial activity” on International Conference on Atomic, Molecular, Optical and Nano Physics with Applications (CAMNP-2019) at Delhi Technological University held on 18 th – 20 th December, 2019.
10. **Best poster award** to Ph.D. student, Anisha Kathpalia, for paper entitled “Ideal fumigation practices for controlling storage insect pests” at ICAR-NCIPM, organized by Indian Chemical Council on 6 th June, 2019, New Delhi.

- 11. Dr. Panjabrao Deshmukh Memorial Trophy** awarded to B. Tech student Ms. Stuti Mittal for excellence in research and development of Innovative Green Model for solving an environmental issue in the competition organized by Eco club, Shivaji College, University of Delhi (29th March, 2019).
- 12.** First Position in **poster presentation** to Ph.D. student Mr. Lokesh Kumar in “National Workshop on Theme Chemistry: Science of Synthesis” organized by Department of Chemistry, University of Delhi, New Delhi (28 th September 2018).
- 13.** B. Tech. student Poorva Srivastava awarded **Young Water Fellow award** 2017, one student selected from India, with seed funding of € 5000 (around 4.0 lakh Indian Rs.) to implement the project at Belgium (Nov, 2017).
- 14.** B. Tech Students Shreya and Avni Mehta selected for New Zealand- India Sustainability Challenge Regional Round held at TERI, India Habitat Centre, New Delhi (Aug 31- Sep 1, 2017).
- 15. Best Poster Award** to Ph.D. student Mr. Abhishek Saini in the “National Symposium on Recent Trends in Biotechnology and Drug Discovery” held at Shri Mata Vaishno Devi University, Katra, India (March 30-31, 2017).
- 16. Best Oral Presentation Award** to B. Tech Student Ms. Poorva Shrivastava for the Session “Green Technology & Sustainability” in the International Conference and Outreach Program on “Environment & Ecology: Sustainability and Challenges” (ENCON- 2017) organized by Sri Venkateshwara College, University of Delhi, New Delhi, India (January 04 - 06, 2017).
- 17. Best Poster Award** to Ph.D. Student Mr. Saurabh Kumar for the recognition of research paper quality, novelty and significance in the “6 th World Congress on Biotechnology” held at New Delhi, India (October 05 - 07, 2015).
- 18.** Second position in **poster competition** of Mr. Saurabh Kumar Ph.D. Student in the “14 th International Oncology Conference” organized by Rajiv Gandhi Cancer Institute & Research Centre, New Delhi, India (February 27- March 1, 2015).

Supervision of Research Fellows/ Scholars/ Student

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| a. | Post-Docs | : | 3 completed (Dr. Saroj Kumar, DST Young Scientist)
(Dr. Rajkumar Bidlan, UGC-PDF)
(Dr. Shikha Gupta, SERB-NPDF, DST) |
| b. | Ph.D. | : | 19 Awarded |
| c. | M.Tech. | : | 41 Awarded |
| d. | B.Tech. | : | 71 Awarded |
| e. | M.Sc. | : | 49 Awarded |

Reputed Journals in which Papers Published

1. Scientific Reports
2. Frontiers in marine science
3. Frontiers in Nanotechnology
4. Reviews in Aquaculture
5. Aquaculture (Elsevier B.V.)
6. Asian Fisheries Science (Asian Fisheries Society, Philippines)
7. Aquaculture International (Springer, U.K.)
8. Aquatic Ecology (Springer, The Netherlands)
9. Aquaculture Nutrition (Blackwell Science, Norway)
10. Archives of Microbiology (Springer Nature)
11. Current Science (Current Science Association & Indian Academy of Science, India)
12. Fish and Shellfish Immunology (Elsevier B.V., U.K.)
13. Fish Physiology & Biochemistry (Springer)
14. Frontiers in Chemistry (Frontiers)
15. Heliyon (Elsevier)
16. Indian Journal of Animal Sciences (Indian Council of Agricultural Research, India)
17. Indian Journal of Experimental Biology (CSIR, India)
18. International Journal of Radiation Biology (Informa Healthcare, U.K.)
19. Journal of Applied Aquaculture (The Haworth Press, Inc., U.S.A.)
20. Journal of Fish Biology (Blackwell Publishing Ltd., U.K.)
21. Journal of World Aquaculture Society (Wiley Online, U.S.A.)
22. Toxicological and Environmental Chemistry (Taylor & Francis, U.K.)
23. Photochemistry & Photobiology (Elsevier B.V., U.K.)
24. The Royal Society of Chemistry
25. Biosensors and Bioelectronics
26. Advanced Science
27. Environmental pollution
28. Journal of Hazardous materials

Editorial Board member

1. Journal of Biotech Research & Biochemistry, USA
2. SF Journal of Nanochemistry and Nanotechnology, USA
3. International Journal of Experimental and Clinical Research, USA
4. Journal of Drug Resistant Pathogen Research, USA
5. BAOJ Aquaculture, USA
6. Biosensors and Bioelectronics, Sweden/UK
7. Annals of Biotechnology, USA

8. Advances in Industrial Biotechnology, USA
9. International Journal of Amino Acids', USA
10. Scientific Journal of Stem Cell Research, USA
11. Current Trends in Ergonomics, USA
12. Journal of Fisheries Science, Singapore

Reviewer of Scientific Journals

1. Aquaculture Reports
2. Frontiers in Environmental Science
3. International Aquatic Research, Springer
4. Journal of Cleaner Production
5. Environmental Pollution
6. Journal of Ecology and the Natural Environment
7. Physical Sciences Research International
8. Aquaculture Research
9. Annals of Marine Biology and Research
10. Oncotarget
11. Journal of Advances in Industrial Biotechnology
12. Biological Chemistry Journal
13. Groundwater for Sustainable Development
14. International Journal of Industrial and Chemical Research
15. Frontiers in Pharmacology
16. Archives of Pharmacal Research
17. Plos-One
18. Journal of Assisted Reproduction and Genetics
19. Heliyon
20. Egyptian Journal of Aquatic Biology and Fisheries
21. Process Biochemistry
22. Communicative and Integrative Biology
23. Sustainability
24. Microbial Pathogenesis

International Jury Member

1. Served as Jury member in the “World Aquaculture Jeju 2015” held at **Jeju, South Korea** (May 26-30, 2015) for the best student’s Presentation award.
2. Served as Jury member in the “World Aquaculture Adelaide 2014” held at **Adelaide, Australia** (June 7 -11, 2014) for the best student’s Presentation award.

Organized Training Programme/ Seminars/ Conferences

1. Served as session chair in the International Conference on Global Perspectives of Medicinal Plants: Traditional System of Medicine to Nano-medicine (ICGPMP 2025) held on March 20-21, 2025 at Ramjas College, University of Delhi, Delhi.
2. Served as session chair at International Conference on Basic, Analytical and Allied Sciences at the Interface of Carbohydrates and Biomass Valorization, Delhi Technological University,

Delhi held on 30th November - 2nd December, 2023.

3. Served as session chair in collaboration with CSIR-NEERI, Dr. Bhim Rao Ambedkar College, University of Delhi, Zoological Survey of India, Kolkata, MoEF & CC, Government of India, GRC India, MSMECCII in the 4th World Environment Summit 2023 to be held on 4th – 6th November 2023.
4. Served as Convener, in “Training of Fish Farming” organized by Department of Zoology, University of Delhi and Dept. of Biotechnology, Delhi Technological University, Delhi (27-28 November, 2021).
5. Served as Course Co-coordinator in online Refresher Course on Life Sciences at Centre for Professional Development in Higher Education (CPDHE), UGC-HRDC, University of Delhi held from January 25 – February 8, 2021
6. Served as Chairman in One-week international e-workshop on Bioinformatics held at Department of Biotechnology, Delhi Technological University, Delhi (14-18 December, 2020).
7. Served as Patron in International Conference on Innovations in biotechnology and life sciences held at Department of Biotechnology, Delhi Technological University, Delhi (18-20 December, 2020).
8. Served as Co-convener in the Hand-on Training Programme on “Recent Advances in Fish Nutrition” (Sponsored by Department of Biotechnology, Govt. of India) organized by Aqua Research Lab Department of Zoology (University of Delhi), New Delhi, India (March 15-17, 2019).
9. Served as member of National Advisory Committee in the “National Seminar on researches in Environment and biosciences: Current Scenario and Future Perspectives” held at Dehradun, 22-23 June 2018.
10. Chairman for the TEQIP-III sponsored Faculty Development Programme on “Recent Developments in Translational Medicine (RDTM-2018)” organized by the Department of Biotechnology, Delhi Technological University, Delhi, India. (March 12-16, 2018).
11. Served as member, Advisory Committee in the International Conference and Outreach Program on “Environment & Ecology: Sustainability and Challenges” (ENCON- 2017) organized by Sri Venkateswara College (University of Delhi), New Delhi, India (January 4-6, 2017).
12. Served as Coordinator in the Workshop on "India's 5G Vision: 2020" jointly with Twentieth GISFI Standardization Series Meeting (GSSM) held at Barkatullah University, Bhopal during March 13-15, 2015.
13. Served as Convener in the “International Conference on Translational Medicine in 21st Century’ Stem Cell Transplantation: Current Status” held at Barkatullah University, Bhopal during April 11-14, 2015.
14. Served as Committee Member in the “International Conference on “Frontiers in Radiobiology: Immunomodulation Countermeasures & Therapeutics” held at New Delhi, during November 11-13, 2014.

Invited Talks

1. Delivered an invited lecture on “Solid waste management by segregation of waste” at STPI Noida on 7th February 2025.
2. Delivered an invited talk on “Sustainable Development Goals: Challenges & Prospects” at Department of Zoology, in collaboration with MMTTC center, Central University of Jammu, on 13 December, 2024.
3. Delivered an invited talk on “Role of Science & Technology: Harnessing Innovations in

Sustainable Development Goals” at UGC-Human Resource Development Centre, Sambalpur University, Sambalpur (Odisha), on 19 November, 2024.

4. Delivered an invited talk on “Role of Science & Technology in the Development of Society” at Physica, The Physics Society, at Department of Physics, Deshbandhu College, University of Delhi, Delhi, on 28 February, 2024.
5. Delivered an invited talk on “Development of Sustainable Culture Techniques of Freshwater Macrophytes & Their Biochemical Composition” at International Conference on Advances in Algal Biotechnology & Taxonomy, at Department of Botany, Chaudhary Charan Singh University, Meerut, on 28 March, 2023.
6. Served distinguished lecture on “Water quality & feed management in pearl farming” at Mukta Utsav, Ghaziabad, U.P., on 25 February, 2023.
7. Served distinguished lecture on “E-waste management and Environment” at STPI, Noida for the theme “E-waste Management & Environment”, on 15 February, 2023.
8. Served distinguished lecture on “Sustainable Development Goals: A Tough Road Ahead” at UGC-HRDC, Jodhpur for the theme “Sustainable Development Goals”, on 14-26 November, 2022.
9. Served distinguished lecture on “Third World War would be for Water” at UGC-HRDC, Jodhpur for the theme “Redefining, Rejuvenating and Re-skilling IPR”, on 22 February, 2022.
10. Delivered an invited talk on “Importance of e-waste management and necessity of general cleanliness”, at Software Technology Parks of India, Noida for the theme "Swachhta Pakhwara" on 15 February 2022.
11. Served distinguished lecture on “Water quality degradation and its impact on aquatic environment” Online Refresher Course on Environment Studies (IDC) organized by UGC Human resource development centre (HRDC) Sambalpur University on 15th November 2021.
12. Served distinguished lecture on “Redefining Quality Research and Excellence” for UGC HRDC Refresher Course Quality Research and Teaching Methodology on 11th November 2021 organized by JNV University, Jodhpur, Rajasthan, India.
13. Delivered an invited talk on “Recent Advances in Amino acids analysis” in BIOGENESIS -VI: Synergy between Academia and Industry” at IILM, College of Engineering and Technology, Noida on April 13, 2019.
14. Served as resource person and delivered invited lecture on “The Role of Yoga in Stress Management” for the University and College teachers of all streams organized by The Centre for Professional Development in Higher Education (CPDHE, UGC-HRDC) on November 28 - December 19, 2017.
15. Served as resource person and delivered invited lecture on “Stress since Human Origin to 21st Century” for the University and College teachers of all streams organized by The Centre for Professional Development in Higher Education (CPDHE, UGC-HRDC) on November 28 - December 19, 2017.
16. Served as resource person and delivered invited lecture on “India’s Higher Education: Assessment and Evaluation” for the University and College teachers of all streams organized by The Centre for Professional Development in Higher Education (CPDHE, UGC-HRDC) on November 21 - December 19, 2017.
17. Served as resource person and delivered invited lecture on “Higher Education: Challenge and Opportunities” for the University and College teachers of all streams organized by The Centre for Professional Development in Higher Education (CPDHE, UGC-HRDC) on November 21 - December 19, 2017.
18. Served as resource person and delivered invited lecture on “Potential of India as a hub of Higher Education” for the University and College teachers of all streams organized by The Centre for

Professional Development in Higher Education (CPDHE, UGC-HRDC) on November 21 - December 19, 2017.

19. Served as resource person and delivered invited lecture on “The Journey of Higher education in India from Patliputra to contemporary times” for the University and College teachers of all streams organized by The Centre for Professional Development in Higher Education (CPDHE, UGC-HRDC) on November 21 - December 19, 2017.
20. Served as resource person and delivered invited lecture on “Disaster Mitigation: A lesson from Gujrat earthquake” in Refresher Course in Climate change and disaster management organized by The Centre for Professional Development in Higher Education (CPDHE, UGC-HRDC) on June 24, 2017.
21. Served as resource person and delivered invited lecture on “Disaster Mitigation: A lesson from Gujrat earthquake” in Refresher Course in Climate change and disaster management organized by The Centre for Professional Development in Higher Education (CPDHE, UGC-HRDC) on June 13, 2017.
22. Served as resource person and delivered invited lecture on “How Safe is Our Drinking Water?” in Orientation Programme on the theme “Orienting Teachers towards new Horizons of Education: Nation Building through Higher Education” for the University and College teachers of all streams (Humanities, Commerce & Science) organized by The Centre for Professional Development in Higher Education (CPDHE, UGC-HRDC) on November 17 - December 15, 2015.
23. Served as resource person and delivered invited lecture on “How to Keep Healthy and Stay Fit?” in Orientation Programme on the theme “Orienting Teachers towards new Horizons of Education: Nation Building through Higher Education” for the University and College teachers of all streams (Humanities, Commerce & Science) organized by The Centre for Professional Development in Higher Education (CPDHE, UGC-HRDC) on November 17 - December 15, 2015.
24. Served as resource person and delivered invited lecture on “Impact of UV-B Radiations Aquatic Ecosystem” in Refresher Course in Environmental Studies/Earth Sciences (Interdisciplinary) organized by The Centre for Professional Development in Higher Education (CPDHE, UGC-HRDC) on October 20, 2015.
25. Served as resource person and delivered invited lecture on “Water Pollution and Its Mitigation” in Refresher Course in Environmental Studies/Earth Sciences (Interdisciplinary) organized by The Centre for Professional Development in Higher Education (CPDHE, UGC-HRDC) on October 20, 2015.
26. Served as resource person and delivered invited lecture on “Nurturing and grooming Educators” in Refresher Course in Grooming of Indian talent in modern perspective organized by The Centre for Professional Development in Higher Education (CPDHE, UGC-HRDC) on October 20, 2015.
27. Served as resource person and delivered invited lecture on “The Science behind Yoga” national seminar on Yoga for improvement of Health, General Efficiency and Performance organized by Department of Yoga, Barkatullah University, Bhopal on June 19, 2015.

International Conferences/ Workshops/ Training Programmes/ Scientific Delegation

Participated in over 30 international conferences, workshops, training programs, and scientific delegations in foreign countries. Delivered presentations, led project discussions, and represented India in global research collaborations including DBT-BBSRC, Newton Fund, and MoES expeditions, with key focus on aquaculture, fish nutrition, and sustainable technologies.

National Conferences

1. Participated and presented a Research Paper in the 14 Asian Fisheries and Aquaculture Forum (14AFAF) organized by the Asian Fisheries Society (AFS), Kuala Lumpur, Malaysia; Indian Council of Agricultural Research (ICAR), New Delhi; Department of Fisheries (DoF), Government of India, New Delhi; and the Asian Fisheries Society Indian Branch (AFSIB), Mangalore, India, held at ICAR Convention Centre, NASC Complex, New Delhi during 12-15 February, 2025.
2. Served as session chair in “International Hybrid Symposium: Changing Status of Ecosystem Health of the River Ganga”, by Aquatic Ecosystem Health & Management Society, on 10-11 June, 2024.
3. Served as Co-Chair at “International Conference on Advances in Algal Biotechnology & Taxonomy,” at Department of Botany, Chaudhary Charan Singh University, Meerut, on 27 March, 2023.
4. Served as a member in the conference “Recent Advances in Nano Medical Sciences (RANMS-2022), in collaboration with Institute of Nano Medical Sciences & University of Delhi, **India** (22-23 June, 2022).
5. Served as Convener in “World Environment Summit 2020” organized by Environment and Social Development Association, Delhi at Vallabhbhai Patel Chest Institute University of Delhi, Delhi, **India** (18-19 January, 2020).
6. Attended and presented paper in the conference “Asian Pacific Aquaculture 2019” held at Chennai, Tamil Nadu, **India** (June 19-21, 2019).
7. Attended and participated in “In-house Programme on NAAC-SSR/NBA-SAR Filling & Preparedness for Assessment” organized by Engineering Staff College of India at Delhi Technological University, Delhi (May 21-23, 2018).
8. Poster presentation on “Partial replacement of fish meal using aquatic macrophytes and agricultural by-products: Impact of the digestive physiology of carp *Labeo rohita*” in “IndoUS Workshop & International Symposium on Biological Timing and Health Issues in the 21st Century”, held at University of Delhi from February 21 – 24, 2017.
9. Poster presentation on “Impact of *Achyranthes aspera* (family: Amaranthaceae) enriched pelleted diets on the performance of *Labeo rohita* in pond culture system” in “IndoUS Workshop & International Symposium on Biological Timing and Health Issues in the 21st Century”, held at University of Delhi from February 21 – 24, 2017.
10. Poster presentation on “Effect of various light Intensities on the physiology response of *Labeo rohita* larvae” in “IndoUS Workshop & International Symposium on Biological Timing and Health Issues in the 21st Century”, held at University of Delhi from February 21 – 24, 2017.
11. Poster presentation on “Impact of temperature on the physiology of Indian major carp *Catla catla*” in “Indo-US Workshop & International Symposium on Biological Timing and Health Issues in the 21st Century”, held at University of Delhi from February 21 – 24, 2017.
12. Attended and presented paper in “The International Conference on Radiation Biology, ICRB

2014” held at Delhi, India (November 11-13, 2014).

13. The study of efficacy of removal of nitrogenous wastes from recirculating system using indigenous filter bed materials. Khangembam C., Sharma J.G. and Chakrabarti R. National Conference on Challenges for Sustainability of Natural Resources and Environment with Emphasis on Aquatic Ecosystem for Livelihood Security, Pantnagar, Uttarakhand, October 10-12, 2014.
14. Attended and presented paper in the National Seminar on “Mountain Fisheries: Challenges and Opportunity for Livelihood Security” held at Directorate of Coldwater Fisheries Research, ICAR, Bhimtal, Nainital, Uttarakhand (November 5-6, 2012).
15. Attended and presented paper in the “Ninth Indian Fisheries Forum” held at Chennai (December 19-23, 2011).
16. Attended and presented paper in “The Sixth Indian Fisheries Forum” held at CIFE, Mumbai (December 17-20, 2002).
17. Attended and presented paper in “89th Session of Indian Science Congress” held at Lucknow University, Lucknow (January 3-8, 2002).
18. Attended and presented paper in “88th Session of Indian Science Congress” held at PUSA, IARI, Delhi (January 3-8, 2001).
19. Attended and presented paper in “International Conference on Ecological Engineering” held at Science City, Calcutta, West Bengal (November 23-27, 1998).
20. Attended a symposium on “Pollution Abatement through Biological Treatment of Industrial Effluents” held at Central Pollution Control Board, CPCB (Ministry of Environment & Forest, Govt. of India), Delhi (March 24, 1998).
21. Attended and presented a paper in the workshop on “Development of Intensive Aquaculture in Fresh and Saline Water in Haryana” held at CCS Haryana Agriculture University, Hisar (September 25-27, 1997).
22. Attended “84th Session of Indian Science Congress” held at Delhi University, Delhi (January 3-7, 1997).
23. Attended and presented paper in “82nd Session of Indian Science Congress” held at Jadavpur University, Calcutta (January 3-8, 1995).

Member of Scientific Societies

1. The Society of Aquaculture Professionals (SAP), (Life Member).
2. Biotechnology Society of India (Life Member).
3. Bio footprints Foundation (Life Member).
4. ICAR-Indian Institute of Pulses Research, Kanpur, India (Life Member).
5. ICAR-Directorate of Medicinal and Aromatic Plants Research, Gujarat, India (Life Member).
6. Asian Fisheries Society, Philippines.
7. Indian Science Congress Association, India (Life Member).
8. World Aquaculture Society, U.S.A.
9. Environment and Social Development Association (ESDA) Delhi (Life Member).
10. Association of Aqua culturists, CIFA, India (Life Member).
11. Indian Fisheries Association, CIFE, India (Life Member).

12. Marine Biological Association of India, CMFRI (Life Member).
13. Electron Microscope Society of India (Life Member).
14. Nutrition Society of India (Life Member).
15. Indian Society of Remote Sensing (ISRS) (Life Member).
16. Indian Immunology Society (Life Member).
17. Indian Society for Radiation Biology (Life Member).
18. Indian Red Cross Society (Life Member).
19. Indian Photobiology Society (Life Member). Affiliated to the Association Internationale de Photobiologie, Switzerland.
20. Coldwater Fisheries Society of India (Life member).
21. Biogas Forum India (A registered Society for the promotion of Biogas technology in India) Centre for Rural Development and Technology, Indian Institute of Technology (I.I.T.), Delhi (Life Member).
22. Indian Water Resources Society, India (Life member)

Extra- Curricular Activities & Administration

1. N.C.C. “C” Certificate holder
2. Best turn out award of N.C.C
3. Participated in N.S.S.
4. Cultural Council Chairman in Delhi Technological University (2012-2014)
5. NSS Founder, Faculty Coordinator in Delhi Technological University (2012-2014)
6. Hostel warden of Ramanujan & Homi Jahangir Bhabha Hostel (2012-2014)
7. Member of several committees of D.T.U. (2012-2019)
8. Time to time served as Hostel office in charge (14 hostels in charge) (2013-2014)
9. Acting Head, Department of Biotechnology, DTU (2016-2017)
10. Head, Department of Biotechnology, Delhi Technological University (January 2018 - December 2020)

Extension Services

1. Serving as Fisheries expert in the live telecast in the “Krishi Darshan” Programme of Doordarshan Kendra, New Delhi.
2. Serving as Fisheries expert in the Radio Programme of Indraprastha Channel, Delhi.
3. Participated as a Fishery expert in the discussion on “Animal Health Management in Rainy Season” on DD Kisan Channel, Govt. of India on August 8, 2019.

Patent Publication

1. A REUSABLE DIGESTION TUBE FOR AMINO ACID ASSAY

(term of 20 years from the 11th day of January 2024 in accordance with the provisions of the Patents Act,1970)

Our invention introduces an advanced apparatus specifically designed for the digestion of samples in amino acid assays. The main component of the device is a borosilicate glass tube known for its resistance to high temperatures and chemical corrosion, making it ideal for the rigorous conditions of amino acid digestion. The tube is combined with a Teflon cap, which ensures chemical inertness during the digestion process. The apparatus features a gas inlet for controlled nitrogen injection and an outlet for the release of air, creating an inert atmosphere inside the tube. This prevents the oxidation of proteins during digestion, which is important for accurate amino acid measurements. A constriction in the tube allows the cap to form an airtight seal, ensuring no external air enters. Unlike previous devices, this apparatus prevents hydrochloric acid spills and is reusable, offering a safer, more efficient, and environmentally friendly solution for amino acid assays. The invention overcomes the limitations of previous methods, which were prone to oxidation of amino acids within the samples and involved complex sealing procedures.

List of Scientific Publications : 167 research publication including book chapters

Published DNA sequences in National Center for Biotechnology Information (N.C.B.I.) U.S.A.

1. *Gordonia* sp. strain A_R 16S ribosomal RNA gene, partial sequence
891 bp linear DNA
Accession: MG807344.1
2. *Gordonia* sp. strain A_F 16S ribosomal RNA gene, partial sequence
892 bp linear DNA
Accession: MG807343.1
3. *Rhodococcus* sp. strain AOB B 16S ribosomal RNA gene, partial sequence.
846 bp linear DNA
ACCESSION MG812524.1
4. *Micrococcus* sp. strain AOB-G 16S ribosomal RNA gene, partial sequence.
895 bp linear DNA
ACCESSION MG812628.1
5. *Acinetobacter* sp. strain AOB-I 16S ribosomal RNA gene, partial sequence. 912 bp linear DNA
ACCESSION MG812687.1

6. *Bacillus* sp. strain LR1 16S ribosomal RNA gene, partial sequence. 927 bp linear DNA
ACCESSION MG813162.1
7. *Chryseobacterium* sp. strain LR3 16S ribosomal RNA gene, partial sequence.
906 bp linear DNA ACCESSION MG818246.1

Books

1. Chakrabarti R. and Sharma, J. G. 2008. Aquahouse: New Dimension of Sustainable Aquaculture. Indian Council of Agricultural Research, ICAR, New Delhi, India. ISBN: 978-81-7164-078-2
2. Srivastava, R.K. and Sharma, J.G. 2014. “Jaiv Prodyogiki” (Biotechnology). University Publication, New Delhi, India, pp.232. ISBN: 978-81-7555-665-2