## volume-1 Innovative Approaches in Aquaculture Research



Chief Editor : **Dr. Anubhuti Minare**, Ph.D., Faculty Member

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Dr. Anubhuti Minare is a faculty member in the Department of Zoology and Applied Aquaculture at Barkatullah University, Bhopal, Madhya Pradesh. She holds both her Master's and Ph.D. degrees in Applied Aquaculture from the Department of Zoology and Applied Aquaculture Barkatullah University. With over six years of academic and research experience, She has been actively involved in teaching undergraduate and postgraduate courses (M.Sc., M.F.Sc.) and has successfully guided more than 50 dissertation students. Her core research interests lie in the fields of Aquaculture, Aquatic Ecology, Fish Nutrition, Fish Health Management, and Fish Reproductive Biology. She has contributed extensively to these domains, with over eight research papers published in national and international journals. In addition to her academic pursuits, she has served as a Subject Expert for MANTHAN and has been associated with various governmental and non-governmental organizations as a domain expert since 2022. She has also been invited as contributor to several projects under the Department of Science and Technology (DST), reflecting her recognized expertise in the field.



Chief Editor: Prof. Vipin Vyas, Professor, Department of Zoology and Applied Aquaculture, Barkatullah University, Bhopal.

Prof. Vipin Vyas is a renowned an aquatic ecologist, currently Professor Faculty of Life Sciences at Barkatullah University, Bhopal. He holds an M.Sc. (1987) and a Ph.D. (1992) in Limnology from the same university. His doctoral research focused on "Limnological studies on Upper Lake & some water bugs of Bhopal with reference to phytoplankton," laying the foundation for his lifelong dedication to freshwater ecosystem studies. Prof. Vyas has over 30 years of teaching and research experience and is widely recognized for his extensive work on river ecology, wetland management, fish biodiversity, and the conservation of small indigenous fish species for nutritional and economic security. He has led several major research projects funded by national agencies such as UGC, ISRO, MOEFCC, DST, and MP Biodiversity Board, with a focus on ecological integrity assessment using multimetric indices, stream health monitoring, and riverine habitat conservation.

He has guided 15 Ph.D. scholars, supervised numerous postgraduate dissertations, and developed long-term ecological monitoring systems in the Narmada, Betwa, and Ganjal rivers. As the principal investigator, he has contributed to critical studies on fish biodiversity, aquatic bird ecology, and wetland restoration. His work is documented in over 60 scientific publications and several international presentations. An active member of several national biodiversity committees and ecological advisory boards, Prof. Vyas is also engaged in capacity building, organizing field-based training, awareness programs, and extension activities. His mentorship and commitment have made him a leading figure in freshwater science education and research in India.



Co-Editor: **Prof. Rajkumar Garg,** Ph.D., Associate Professor & Head Department of Bioscience Barkatullah University, Bhopal-462026, Madhya Pradesh

Dr. Rajkumar Garg is an Associate Professor & Head in the Department of Bioscience at Barkatullah, University, Bhopal, Madhya Pradesh since 2022. He received his Master's and Ph.D. degree in Zoology from School of Studies in Zoology, Jiwaji University, Gwalior, and joined M.P. Council of Science & Technology (MPCST), DST, Government of Madhya Pradesh as Scientific Officer thereafter promoted as Joint Project Director, where he had since 2007 till 2022. He was visited Kunming, China as Researcher for research work presentation in 2014 with the financial support of DST, GOI, New Delhi. Hence, Dr. Garg have more than 20 years of research experience. In this tenure, he has published more than 50 research papers in international and national repute journals; published more than 500 DNA sequences of various genes in GenBank, NCBI, USA for DSI purposes, developed SCAR molecular markers for To tor and Tor puttitora (an Indian mahseer). Dr Garg has developed DNA barcodes for more than 50 animal species and available with BOLDSYSTEMS at global level for reference purposes. During this tenure Dr. Garg has successfully operated and completed 11 research projects funded from DST, DBT, DST-SERB, NRDMS, MPCST. Dr. Garg has been appointed as Nodal Officer for Innovation & Entrepreneurship, under Biotechnology Park for Madhya Pradesh in which he coordinated with the Society for Innovation and Entrepreneurship hosted by MPCST to encourage and actively facilitate startup to faculties and students to convert intellectual property developed by them into business ventures. His main research interests are in the areas of molecular Genomics, Conservation Biology and Database Generation Systems. He has focused in the last few years on the research issues in DNA based databases, data warehousing (that includes metadata integration from multiple sources). He has participated in many conferences in the capacity of Scientist/faculty member, invited speaker, etc. He is closely associated with many academic and government institutions as a subject expert, advisor offering advice in planning, selection, implementation and evaluation of technology solutions.



Co-Editor : **Dr. Pinky Kaur**, Faculty Member Govt. Mahatma Gandhi College, Jawad, District Neemuch (M.P.)

Dr. Pinky Kaur holds a Master's Degree in Zoology and a doctorate in Fish Helminth Parasites and Diseases from Barkatullah University in 2012. She has academic experience in teaching UG, PG (M.Sc, M.F.Sc.), M.Phil; guiding several dissertation students and research for the past 13 years. She also worked as a Post-doctoral Fellow and DST- Women Scientist-A at Central Marine Fisheries Research Institute, Kerala, India on Molecular aspects of Helminth Parasites in Fishes. She has achieved many (40) credits in National and International Papers. She also received and was awarded the "Fellowship of Global Environment & Social Association (GESA), New Delhi" and "Woman Scientist of the Year" for her outstanding contribution to Fish helminthology and Pathology by Vigyan Varta (an international e-magazine for science enthusiasts).



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