



# ICAR-National Bureau of Fish Genetic Resources

Canal Ring Road, Dilkusha PO, Lucknow-226002, India



**Name** Dr. Mahender Singh

**Designation** Principal Scientist

**Professional experience** 18 years



**Qualification**

- M.Sc. Biotechnology, Kurukshetra University, Kurukshetra, Haryana.
- Ph.D. Zoology & Biotechnology, H.N.B. Garhwal University, Srinagar, Uttrakhand.

**Current area of Research**

- DNA Barcoding;
- Phylogenetics;
- Population Genetics;
- Bioinformatics.

**Area of Research Expertise**

- DNA Barcoding
- Phylogenetics

**Awards/ Recognitions**

- Best Scientist Award for 2017 by ICAR-NBFGR, Lucknow.
- Consulting Editor "Journal of Kalash Science" , ISSN 2321-7634, Allahabad.
- Received Fellowship (2015) of Bioved Research Institute of Agriculture & Technology, Allahabad.
- ICAR-NET in Biotechnology (Animal Science), 1998.

**Publication (no.)**

- **Research papers** 46
- **Reviews** -
- **Books** -
- **Book Chapters** 01
- **Popular articles** 14
- **Others** 2680 NCBI Accessions; 10 Training manuals; 6 Brochures; 5 Databases; 1 Theme Paper.

**Link to Google Scholar** <https://scholar.google.co.in/citations?user=X6Ccoa8AAA&hl=en>

## Important Research Publications

1. Lalramliana, Samuel Lalronunga, Sumit Kumar and Mahender Singh\* (2018). DNA barcoding revealed a new species of *Neolissochilus* Rainboth, 1985 from the Kaladan River of Mizoram, North East India. *Mitochondrial DNA A DNA Mapp Seq Anal.* Apr 26:1-8. doi: 10.1080/24701394.2018.1450398.
2. Baisvar, V. S., Kumar, R., Singh, M., Singh, A. K., Chauhan, U. K., Nagpure, N. S., & Kushwaha, B.(2018). Genetic Structuring in Riverine Population of *Channa striata* (Bloch, 1793) from India using Cytochrome Oxidase I Gene. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences* 1-10. DOI: 10.1007/s40011-017-0943-z.
3. Srivastava, S., Kushwaha, B., Prakash, J., Pandey, M., Agarwal, S., Kumar, R., Nagpure, N.S., Singh, M., Das, P., Joshi, C. and Jena, J.K. (2017) Identification and characterization of SSRs in *Clarias batrachus* and their application in population study. *Fisheries Science* 83(2), pp.265-272.
4. Singh, M., Verma, R., Yumnam, R. and Vishwanath, W. (2017) Molecular phylogenetic analysis of genus *Osteobrama* Heckel, 1843 and discovery of *Osteobrama serrata* sp. nov. from North East India. *Mitochondrial DNA Part A* DOI: 10.1080/24701394.2017.1285289. Published online: 02 Mar 2017.
5. Lalramliana, L., Vanlalhlimpaia, D., & Singh, M. (2017) *Laubuka parafasciata*, a new cyprinid fish species (Teleostei: Cyprinidae) from Mizoram, Northeastern India. *Zootaxa* 4244(2): 269-276.
6. Rashid, I., Nagpure, N.S., Srivastava, P., Kumar, R., Pathak, A.K., Singh, M., & Kushwaha, B. (2017). HRGFish: A database of hypoxia responsive genes in fishes. *Scientific Reports* 7: 42346.
7. Nagpure, N.S., Pathak, A.K., Pati, R., Rashid, I., Sharma, J., Singh, S.P., Singh, M., Sarkar, U.K., Kushwaha, B. and Kumar, R. (2016). Fish Karyome (Version 2.1): A Chromosome Database of Fish and other Aquatic Organisms. *Database* baw012. 0136711
8. Verma, R., Singh, M. and Kumar, S. (2016) Unraveling the limits of mitochondrial control region to estimate the fine scale population genetic differentiation in anadromous fish *Tenualosa ilisha*. *Scientifica*, Article ID 2035240 doi.org/10.1155/2016/2035240
9. Lakra, W.S., Singh, M., Goswami, M., Gopalakrishnan, A., Lal, K.K., Mohindra, V., Sarkar, U.K., Punia, P.P., Singh, K.V., Bhatt, J.P. and Ayyappan, S. (2016) DNA barcoding Indian freshwater fishes. *Mitochondrial DNA A* 27(6): 4510-4517.
10. Nagpure, N.S., Rashid, I., Pathak, A.K., Singh, M.\*, Pati, R., Singh, S.P., Sarkar, U.K. (2015) FMiR: A Curated Resource of Mitochondrial DNA Information for Fish. *PLoS ONE* 10(8):e0136711.
11. Nagpure, N.S., Rashid, I., Pathak, A.K., Singh, M., Singh, S.P., Sarkar, U.K. (2015) In silico analysis of SSRs in mitochondrial genomes of fishes. *Mitochondrial DNA* 26(2):195-201.
12. Singh, A.K., Kumar, R., Singh, M., Mishra, A.K., Chauhan, U.K., Baiswar, V.S., Verma, R.,

- Nagpure, N.S. and Kushwaha, B. (2015) Mitochondrial 16S rRNA gene based evolutionary divergence and molecular phylogeny of *Barilius* spp. *Mitochondrial DNA* 26(1):41-47.
13. Nagpure N.S., Rashid, I., Pati, R., Pathak, A.K., Singh, M., Singh, S.P., Sarkar, U.K. (2013) FishMicrosat: a microsatellite database of commercially important fishes and shellfishes of the Indian subcontinent. *BMC Genomics* 14(1):630 doi:10.1186/1471-2164-14-630.
  14. Singh, M., Lakra, W.S., Bahuguna S.N. and Kartavtsev Y. (2012). Cytochrome b gene sequence divergence of seven sisorid species of catfish genus *Glyptothorax* (siluriformes, sisoridae) from India. *Molecular Biology Reports* 39(4):4275-82.
  15. Singh, M., Gupta, A. and Lakra, W.S. (2012) In silico 3-D structure prediction of cytochrome b protein of sisorid catfish *Glyptothorax ngapang*. *Indian Journal of Biotechnology* 11:156-162.
  16. Pandey, A., Lakra, W.S., Thapliyal, R.P., Goswami, M., Singh, M. and Malakar, A.K. (2012) Morphological taxonomy and molecular divergence of four balitorid species (subfamily: Nemachelinae) from Central Himalaya, India. *Mitochondrial DNA* 23(3): 239-249.
  17. Malakar AK, Lakra WS, Goswami M, Singh M, Mishra RM (2012) Molecular identification of three *Ompok* species using mitochondrial COI gene. *Mitochondrial DNA* 23(1): 20-24.
  18. Malhotra, A., Jaiswal, N., Malakar, A.K., Verma, M.S., Singh, H.R., Lakra, W.S., Malhotra, S.K., Shamsi, S. (2012). The morphology and genetic characterization of *Itheringascaris goai* n. sp. (Nematoda: Raphidascarididae) from the intestine of the silver whiting and spotted catfish off the central west coast of India. *Journal of Helminthology* 86(3): 353-362.
  19. Lakra, W.S., Verma, M.S., Goswami, M., Lal, K.K., Mohindra, V., Punia, P., Gopalakrishnan, A., Singh, K.V., Ward, R.D. and Hebert, P. (2011). DNA barcoding Indian marine fishes. *Molecular Ecology Resources* 11(1): 60-71.
  20. Lakra W.S., Goswami M, Yadav K, Gopalakrishnan A, Patiyal RS, Singh M (2011). Development and characterization of two cell lines PDF and PDH from *Puntius denisonii* (Day 1865). *In Vitro Cell Dev Biol Anim* 47(2):89-94.
  21. Pandey, S., Nagpure, N.S., Kumar, R., Sharma, S., Srivastava, S.K. and Verma, M.S. (2006) Genotoxicity Evaluation of Acute Doses of Endosulfan to Fresh Water Teleost *Channa punctatus* (Bloch) By Alkaline Single Cell Gel Electrophoresis. *Ecotoxicology and environmental Safety* 65(1): 56-61.
  22. Pandey, S., Kumar, R., Sharma, S., Nagpure, N.S., Srivastava, S.K. and Verma, M.S. (2005). Acute toxicity bioassays of Mercuric Chloride and Malathion on air breathing fish *Channa punctatus* (Bloch). *Ecotoxicology and environmental Safety* 61(1): 114-120.