




ICAR-National Bureau of Fish Genetic Resources
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Name	Dr. Ravindra Kumar	
Designation	Principal Scientist & Head, Molecular Biology and Biotechnology Division	
Date of birth	10 January, 1968	
Professional experience	>21 years	
Qualification (PG and above)	M.Sc., Ph.D.	
Current area of Research	<ul style="list-style-type: none">• Chromosomal localization of genes using molecular cytogenetic tool.• Whole genome sequencing.• Bioinformatics and Databases	
Area of Research Expertise	<ul style="list-style-type: none">• Fish genomics• Bioinformatic analyses of genomic data• Population genetics• Molecular cytogenetics• Ecotoxicology and genotoxicity	
Awards/ Recognitions (only National and International)	<ul style="list-style-type: none">• Nil	
Publication (no.) <ul style="list-style-type: none">• Research papers• Reviews• Books• Book Chapters• Popular articles• Others	<ul style="list-style-type: none">• 82• -• 02• 10• 05• CD/ Database: 02; Ph.D. students supervised: 05; NAIP sponsored foreign training on 'Transgenic Animals (Fisheries)' at Institute of Molecular and Cell Biology, A-STAR, Biopolis, Singapore.	

Important Research Publications

Ali D, Nagpure N S, Kumar S, **Kumar R**, Kushwaha B (2008). Genotoxicity assessment of acute exposure of chlorpyrifos to freshwater fish *Channa punctatus* (Bloch) using micronucleus assay and alkaline single-cell gel electrophoresis. *Chemosphere*, 71: 1823-1831.

Singh M, **Kumar R**, Nagpure N S, Kushwaha B, Gond I and Lakra W S (2009). Chromosomal localization of 18S and 5S rDNA using FISH in genus *Tor* (Pisces, Cyprinidae). *Genetica*, 137(3): 245-252.

- Mani I, **Kumar R**, Singh M, Kushwaha B, Nagpure N S, Srivastava P K, Murmu K, Rao D S K and Lakra W S (2009). Karyotypic diversity and evolution of seven Mahseer species (Pisces, Cyprinidae) from India. *Journal of Fish Biology* 75: 1079–1091.
- Singh M, **Kumar R**, Nagpure N S, Kushwaha B, Mani I, Lakra W. S. (2009). Extensive NOR site polymorphism in geographically isolated populations of Golden mahseer, *Tor putitora*. *Genome* 52(9): 783-789.
- Singh M, **Kumar R**, Nagpure N S, Kushwaha B, Mani I, Chauhan U K and Lakra W S (2009). Population distribution of 45S and 5S rDNA in golden Mahseer, *Tor putitora*: Population specific FISH marker. *Journal of Genetics*, 88(3): 315-20.
- Kumar R**, Nagpure N S, Kushwaha B, Srivastava S K and Lakra W S (2010). Investigation of the genotoxicity of Malathion to freshwater teleost fish *Channa punctatus* (Bloch) using micronucleus test and comet assay. *Archives of Environmental Contamination and Toxicology*, 58(1):123-30.
- Atindra Kumar Pandey, N. S. Nagpure, Sunil P. Trivedi, **Ravindra Kumar**, Basdeo Kushwaha (2011). Profenofos induced DNA damage in freshwater fish, *Channa punctatus* (Bloch) using alkaline single cell gel electrophoresis. *Mutation Research: Genetic Toxicology and Environmental Mutagenesis*. Dec 24, 726(2): 209-14.
- Basdeo Kushwaha, **Ravindra Kumar**, N S Nagpure, Satish K Srivastava, V S Basheer, M K Anil and W S Lakra (2011). Chromosomal studies of three vulnerable marine fishes from West Coast of India. *Indian Journal of Geo-Marine Sciences* 40(1): 62-66.
- Pavan Kumar, **Ravindra Kumar**, N S Nagpure, B Kushwaha, P Nautiyal and A Dabas (2013). Genotoxicity and antioxidant enzyme activity induced by hexavalent chromium in *Cyprinus carpio* after *in vivo* exposure. *Drug and Chemical Toxicology*. October, 36(4): 451-60.
- Ravindra Kumar**, B Kushwaha and N S Nagpure (2013). Characterization and physical mapping of 18S and 5S ribosomal genes in Indian major carps (Pisces, Cyprinidae). *Micron*, 49: 40–45.
- Indra Mani, **Ravindra Kumar**, Mamta Singh, B Kushwaha, N S Nagpure, P K Srivastava and W S Lakra (2013). Chromosomal distribution of constitutive heterochromatin in eight species of mahseers (Family: Cyprinidae) from India. *Indian J Biotechnology*, 12: 178-186.
- C D Nwani, N S Nagpure, **Ravindra Kumar**, Basdeo Kushwaha and W S Lakra (2013). DNA damage and oxidative stress modulatory effects of glyphosate-based herbicide in freshwater fish, *Channa punctatus*. *Environmental Toxicology and Pharmacology*, 36(2): 539–547.
- Ravindra Kumar**, Mamta Singh, Basdeo Kushwaha, N S Nagpure, Indra Mani and WS Lakra (2013). Molecular characterization of major and minor rDNA repeats and genetic variability assessment in different species of mahseer found in North India. *Gene*, 527(1): 248–258.
- Ravindra Kumar**, Basdeo Kushwaha, Naresh S. Nagpure, Bijoy K. Behera and Wazir S. Lakra (2013). Karyological and molecular diversity in three freshwater species of the genus *Channa* (Teleostei, Perciformes) from India. *Caryologia: International Journal of Cytology, Cytosystematics and Cytogenetics*, 66: 2, 109-119.
- Goswami M, Yadav K, Dubey A, Sharma BS, Konwar R, **Kumar R**, Nagpure NS, Lakra WS (2014). *In vitro* cytotoxicity assessment of two heavy metal salts in a fish cell line (RF). *Drug and Chemical Toxicology*, 37(1): 48-54.

- Anurag Dabas, N S Nagpure, R M Mishra, Basdeo Kushwaha, **Ravindra Kumar** and Pavan Kumar (2014). Investigation of cadmium-induced genotoxicity and oxidative stress response in Indian major carp, *Labeo rohita*. *Human and Ecological Risk Assessment: An International Journal*, 20(2): 510-526.
- Christopher Didigwu Nwani, Naresh Sahebrao Nagpure, **Ravindra Kumar**, Basdeo Kushwaha, Pavan Kumar and Wazir Singh Lakra (2014). Induction of micronuclei and nuclear lesions in *Channa punctatus* following exposure to carbosulfan, glyphosate and atrazine. *Drug and Chemical Toxicology*, 37(4): 370-377.
- Pavan Kumar, **Ravindra Kumar**, Naresh Sahebrao Nagpure, Prakash Nautiyal, Basdeo Kushwaha, Christopher Didigwu Nwani and Wazir Singh Lakra (2015). *In vivo* assessment of DNA damage in *Cyprinus carpio* after exposure to potassium dichromate using RAPD. *Turkish Journal of Veterinary and Animal Sciences*. Jan.- Feb., 39(2): 121-127.
- AK Singh, **R Kumar**, M Singh, AK Mishra, U K Chauhan, VS Baisvar, R Verma, NS Nagpure and Basdeo Kushwaha (2015). Mitochondrial 16S rRNA gene based evolutionary divergence and molecular phylogeny of *Barilius* spp. *Mitochondrial DNA*. Feb., 26(1): 41-47.
- Naresh Sahebrao Nagpure, Rashmi Srivastava, **Ravindra Kumar**, Basdeo Kushwaha, Satish Kumar Srivastava, Pavan Kumar and Anurag Dabas (2015). Assessment of genotoxic and mutagenic potential of hexavalent chromium on the freshwater fish *Labeo rohita* (Hamilton, 1882). *Drug and Chemical Toxicology*, Jan., 38(1): 9-15.
- N S Nagpure, Rashmi Srivastava, **Ravindra Kumar**, Anurag Dabas, Basdeo Kushwaha and Pavan Kumar (2015). Assessment of pollution of river Ganges by tannery effluents using genotoxicity biomarkers in murrel fish, *Channa punctatus* (Bloch). *Indian Journal of Experimental Biology*, July, 53: 476-483.
- M Goswami, G Hariprasad, A Dubey, **R Kumar**, NS Nagpure, A Srinivasan, TP Singh and WS Lakra (2015). Proteomics analysis of liver tissue of *Labeo rohita*. *Current Proteomics*, 12(1): 56-62.
- Basdeo Kushwaha, **Ravindra Kumar**, Suyash Agarwal, Manmohan Pandey, N S Nagpure, Mahender Singh, Shreya Srivastava, C G Joshi, P Das, L Sahoo, P Jayasankar, P K Meher, T M Shah, A B Patel, Namrata Patel, P Koringa, Sofia P Das, Siddhi Patnaik, Amrita Bit, Sarika Agarwal, M A Iquebal, Dinesh Kumar, J K Jena (2015). Assembly and variation analyses of *Clarias batrachus* mitogenome retrieved from WGS data and its phylogenetic relationship with other catfishes. *Meta Gene*, 5 (September): 105-114.
- Suyash Agarwal, Naresh Sahebrao Nagpure, Prachi Srivastava, Basdeo Kushwaha, **Ravindra Kumar**, Manmohan Pandey, Shreya Srivastava (2016). *In silico* genome wide mining of conserved and novel miRNAs in the brain and pineal gland of *Danio rerio* using small RNA sequencing data. *Genomics Data* 7: 46-53.
- NS Nagpure, Akhilesh K Mishra, A S Ninawe, Avinash Rasal, Akhilesh Dubey, Amit Kumar, M Goswami, **Ravindra Kumar*** and J K Jena (2016). Molecular and cytogenetic characterization of fish cell lines and its application in aquatic research. *Natl. Acad. Sci. Lett.* 39(1) (January-February 2016): 11-16.
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