



# National Bureau of Fish Genetic Resources

(Indian Council of Agricultural Research)

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



<b>Name</b>	<b>Dr. A. Gopalakrishnan</b>
<b>Designation</b>	Principal Scientist & Officer-in-Charge, NBFGR Cochin Unit, Kochi - 682 018.
<b>Date of birth</b>	05.07.1962.
<b>Professional experience</b>	21
<b>Qualification</b>	M.Sc. (Zoology); Ph.D. (Mariculture)



**Current area of Research** Genetic characterization of fishes; Development of Molecular Markers in fish; Cryopreservation of milt of fishes; Fish Reproduction

**Area of Research Expertise**

- Genetic stock identification of fishes using DNA markers
- DNA Barcoding of the fishes using mtDNA markers.
- Development of protocol for cryopreservation of milt of indigenous freshwater fishes for conservation
- Captive breeding of indigenous freshwater fishes

**Awards/ Recognitions**

Awards:

- Best Scientist Award 2008 – 2009, National Bureau of Fish Genetic Resources, Lucknow.
- **Dr. V.G. Jhingran Swaran Padak** 1992 Award for the contribution in the field of Cryopreservation of Fish Gametes (Team Member) by the Nature Conservators.
- **Senior Scientist Award** 1992 for the outstanding contribution in the field of fish milt cryopreservation as a Team Member by NATCON.

Recognition: International Organizations

- Member – International Consortium of Barcode of Life – Fish Barcode of Life Initiative (FishBoL) Regional Working Group – India.
- Contributor – Freshwater Eco-regions of the World (FEOW) – Region Eurasia, WWF – The Nature Conservancy, USA.
- Collaborator (Code No. 1148) – Fishbase, World Fish Center, Penang, Malaysia.

National Organizations

- Member – Kerala State Biodiversity Board as per G.O. (Ms) No.3/08/Env. Dated 11.11.2008 for the period of 5 years.
- Member – Kerala Biodiversity Committee for the period of 3 years from 28/10/2002 onwards Govt. of Kerala Order No. G.O. (Ms) No: 75/2002/STED, dated 28/10/2002.
- Member – Taskforce “Green certification of ornamental fish” MPEDA, Ministry of Commerce & Industry, Govt. of India. Ref

No. 5/2(B)/OFD/HO – 2007 Vol 2 – B dated 04/12/08.

- Member, Expert Group – on stock assessment, breeding and conservation of *Puntius denisonii*. Ref No.3/5/OFD/HO – 2006 – 07 dated 05/01/2009, MPEDA, Ministry of Commerce & Industry, Govt. of India.
- Member – State Steering Committee (SSC) – National Biodiversity Strategic Action Plan (NBSAP), Kerala.
- Expert Member (Fisheries) – Monitoring Committee, Ernakulam Zilla Panchayat, Peoples Biodiversity Register Programme, Govt. of Kerala, 1998 – 2000. (GP7.010/98 dated 29 March, 1998)
- Member – Board of Studies in Marine Biotechnology, Cochin University of Science and Technology, Kochi – 682 022. Order No. Conf.II/6689/98 dated 22/05/2006 for the period of 5 years.
- Member – Faculty Environmental Sciences, Cochin University of Science and Technology, Kochi – 682 022. Order No. Conf.II/6689/Faculty/2006(2) dated 28/10/2006 for the period of 5 years.
- Member – Board of Studies in Industrial Fisheries, Cochin University of Science and Technology, Kochi – 682 022. Order No. Conf.II/6689/BOS/2006(11) dated 28/10/2006 for the period of 5 years.
- Member – Executive Council, Marine Biological Association of India, Kochi, Kerala, India.
- Member – Editorial Board, Journal of the Marine Biological Association of India, Kochi, Kerala, India.
- Member – Editorial Board, J. Aquacult, Muzaffarnagar, U.P., India.

#### Publication (no.)

• Research papers	5
• Reviews	1
• Books	3
• Book Chapters	7
• Popular articles	1
• Others (extension material)	4
	7
	3

Online Database: NCBI Genbank Accessions (Polymorphic microsatellite markers & species-specific DNA sequences): ~ 680

#### Important Research Publications

Muneer Abdul P M, Sivanandan Remya, **Gopalakrishnan A**, Basheer V S, Musammilu K K and Ponniah A G (2010) Development and characterization of RAPD and microsatellite markers for genetic variation analysis in the critically endangered yellow catfish *Horabagrus nigricollaris* (Teleostei: Horabagridae). *Biochem Genet.* DOI 10.1007/s10528-010-9389-1

Muneer Abdul P M, **Gopalakrishnan A**, Sivanandan R, Basheer V S and Ponniah A G (2010) Genetic variation and phylogenetic relationship between two species of yellow catfish, *Horabagrus brachysoma* and *H. nigricollaris* (Teleostei: Horabagridae) based on RAPD and

Padmakumar K G, Bindu L, Basheer V S, **Gopalakrishnan A** and Lakra (2010). Threatened fishes of the World: *Clarias dussumieri dussumieri* Valenciennes, 1840 (Clariidae). *Environmental Biology of Fishes* **87**: 297-298.

Swaminathan R T, Lakra W S, **Gopalakrishnan A**, Basheer V S, Khushwaha B & Sajeela K A (2010). Development and characterization of a new epithelial cell line PSF from caudal fin of Green chromide, *Etroplus suratensis* (Bloch, 1790). *In Vitro Cell.Dev.Biol.-Animal*, DOI 10.1007/s11626-010-9326-y.

Muneer Abdul P M, **Gopalakrishnan A**, Musammilu K K, Mohindra V, Lal K K, Basheer V S, Lakra W S (2009). Genetic variation and population structure of endemic yellow catfish, *Horabagrus brachysoma* (Bagridae) among three populations of Western Ghat region using RAPD and microsatellite markers. *Molecular Biology Reports*, **36**:1779–1791 (DOI 10.1007/s11033-008-9381-6).

**Gopalakrishnan A**, Musammilu K K, Basheer V S, John L, Padmakumar K G, Lal K K, Mohindra V, Punia P, Dinesh K, Hashim M, Ponniah A G, and Lakra, W S (2009). Low genetic differentiation in the populations of the Malabar carp. *Labeo dussumieri* as revealed by allozymes, RAPD and microsatellites. *Asian Fisheries Science*, **22(2)**: 359-391.

Goswami M, Thangaraj K, Chaudhary B K, Bhaskar L V S K, **Gopalakrishnan A**, Joshi M B, Singh L & Lakra W S (2009) Genetic heterogeneity in the Indian stocks of seahorse (*Hippocampus kuda* and *Hippocampus trimaculatus*) inferred from mtDNA cytochrome *b* gene. *Hydrobiologia*, **621**:213–221.

Muneer Abdul P M, **Gopalakrishnan A**, Basheer V S and Lakra W S. (2008). Identification of random amplified polymorphic DNA (RAPD) markers in endemic yellow catfish, *Horabagrus brachysoma* (Gunther 1864). *Asian Fisheries Science* **21(2)**: 293-304.

Lakra W S, Goswami M and **Gopalakrishnan A**, (2008) Molecular identification and phylogenetic relationships of seven Indian sciaenids (Pisces: Perciformes, Sciaenidae) based on 16S rRNA and Cytochrome c Oxidase Subunit I Mitochondrial Genes. *Molecular Biology Reports* **36**:831–839.

Chauhan T, Lal K K, Mohindra V, Singh R K, Punia P, **Gopalakrishnan A**, Sharma P C and Lakra W S (2007). Evaluating Genetic differentiation in wild populations of the Indian major carp, *Cirrhinus mrigala* (Hamilton-Buchanan, 1882): evidence from allozyme and microsatellite markers. *Aquaculture*, **269**: 135 – 149.

Muneer Abdul P M, **Gopalakrishnan A**, Lal K K and Mohindra V, Basheer V S, Ponniah A G and Lakra W S (2007) Population genetic structure of endemic and endangered yellow catfish, *Horabagrus brachysoma*, using allozyme markers. *Biochemical Genetics*, **45** (9/10): 637-645.

**Gopalakrishnan A**, Muneer P M A, Musammilu K K, Lal K K, Kapoor D and Mohindra V (2006). Primers from the orders Osteoglossiform and Siluriform detect polymorphic microsatellite loci in sun-catfish, *Horabagrus brachysoma* (Teleostei: Bagridae). *Journal of Applied Ichthyology*, **22**: 456-458.

Haniffa M A, Nagarajan M, **Gopalakrishnan A** and Musammilu K K (2007). Allozyme variation in a threatened freshwater fish, spotted murrel (*Channa punctatus*) in South Indian River systems. *Biochemical Genetics*, **45(3 – 4)**: 363-374.

Nagarajan M, Haniffa M A, **Gopalakrishnan A**, Basheer V S and Muneer A P M (2006). Genetic

variability of *Channa punctatus* populations using randomly amplified polymorphic DNA. *Aquaculture Research*, 37: 1151-1155.

Haniffa M A, Nagarajan M and **Gopalakrishnan A** (2006). Length–weight relationships of *Channa punctata* (Bloch, 1793) from Western Ghat Rivers of Tamil Nadu. *Journal of Applied Ichthyology*, **22**: 308–309.