Dr. Kanta Das Mahapatra

Principal Scientist

Mob- 09438420385

E-mail- kdmahapatra@yahoo.co.in

Department	Fish Genetics & Biotechnology Division
Institute/University	Central Institute of Freshwater Aquaculture (*Indian Council of Agricultural Research*)
Address	Central Institute of Freshwater Aquaculture P.O.- Kausalyaganga, Bhubaneswar- 751002 Odisha, India
Date of Birth	23rd February, 1961
Sex	Female
Tel	0674 - 2465507
Fax	0674 - 2465407

Educational Qualifications

1	**Ph. D.** (Zoology)	Utkal University, Bhubaneswar. 2000
2	**D.F.Sc.**	CIFE, Mumbai. 1988
3	**M.Sc.** (Zoology)	Utkal University, Vani Vihar, Bhubaneswar. 1981

Awards & recognitions	**ICAR** (Indian council of Agricultural Research) **one-time special award** for release of CIFA-IR-1 (Jayanti) on July 16th 1998. CIFA, Kausalyaganga, **Best team award** (Fish Genetics and Biotechnology), 1999. Fishery technocrat Forum, Chennai, **Team award** for outstanding contribution in the field of Fishery and development of improved rohu (Jayanti), 2000. **International fund for Agriculture Research (IFAR) fellowship** by IFAR board Consultative Group of International Agriculture Research (CGIAR), Washington DC, USA at World Fish center, Penang, Malaysia and other CGIAR centers at Philippines and Malaysia for a period of 05.09.2003- 14.11.2003 to study on "Perspectives of CGIAR system". **Selected as board member of the selection committee** for International Fund for Agriculture Research (IFAR) fellowship for the years 2004-2007 by CGIAR, Washington D.C.USA.. **Selected as chairperson of the selection committee** for International Fund for Agriculture Research (IFAR) fellowship for the years 2007-2010 by CGIAR, Washington D.C.,, USA.. As a **key note speaker** in the Genetics in Aquaculture session of World Aquaculture Society conference at Hanoi, Vietnam during 5th to 8th August 2007. **FAO consultant to Nepal** on " Genetic improvement of carps in Nepal" from 6th-26th December 2007 **Resource person and key presenter** in the International training program on " Quantitative Genetics & application to Aquaculture" organized by WorldFish Center, Malaysia at Thailand & Sri Lanka Special appreciation award for CIFA, Kausalyaganga for Institute building for 2005. As a team member received **special appreciation** research team award from CIFA during Annual day celebration for 2006 **Best Division team award** (Fish Genetics and Biotechnology) for 2007.

	Special appreciation plaque for contribution towards growth of CIFA for 2008. **Represented India as Focal point expert** in the consultative workshop on "Broodstock management and dissemination of improved fish breeds to promote aquaculture in SAARC countries" at Islamabad, Pakistan during 13-14 March 2012.
Research Experiences	➢ Selective breeding of rohu (*Labeo rohita*) with 17% average realized selection response per generation after seven generations of selection. ➢ Developed breeding programme for rohu, mass tagging of fish with PIT tag, production of fullsib groups, rearing of fullsib groups in nursery as well as wet laboratory, mass challenge protocol against aeromoniasis, selective breeding for disease resistant trait, data analysis using SAS package, dissemination planning etc. ➢ Carp hatchery management & growout culture ➢ Genetic improvement of carps through genome manipulation
Current Research Interests	• Selective breeding & stock improvement of carps • Breed improvement of freshwater prawn *M.rosenbergii* • Genome manipulation
Current Research Projects	• Stock evaluation of Catla.(*Catla catla*) for establishment of base population and selective breeding of rohu for two traits (growth & disease resistance against aeromoniasis) • Selective breeding of freshwater prawn (*M. rosenbergii)* • Improving disease resistance of rohu carp and tiger shrimp farmed in India: Developing and implementing advanced molecular methods and streamlining access to and use of genetic resources • Quality seed production and stock upgradation of carps through use of cryopreservation technology in the selected hatcheries of India
Completed Projects	• Selective Breeding of Rohu (*Labeo rohita),* Phase- I (Indo-Norwegian Programme) • Genetic Improvement of Rohu (*Labeo rohita)* for Growth through

	Selective Breeding, Phase- II (Indo-Norwegian Program) • Selective breeding of Rohu, *Labeo rohita* for innate resistance to aeromoniasis (Indo-Norwegian Program) • Achieving greater food security and eliminating poverty by dissemination of Improved Carp Strains fish in India (CIFA-WorldFish center collaborative project) • Age effect of parents on the growth performance of offspring and rate of inbreeding in different carp hatcheries of Orissa state • Sustainable genetic improvement of rohu (*Labeo rohita*) for growth through selective breeding • Genetic improvement of rohu for growth and disease resistance against *Aeromonas hydrophila* through sustainable selective breeding • Cryopreservation and utilization of male gametes of improved rohu (Jayanti) • Standardization of breeding and rearing of some of the commercially important ornamental fishes with greater emphasis to indigenous fishes. • Stock comparison and development of base population of giant freshwater prawn *Macrobrachium rosenbergii*
Teaching experiences	**Ph.D Guidance** Guided Dr. S.Sarkar for Her Ph.D in Zoology On "Genetic And Biochemical Parameters of some important hybrids of Carps" (Awarded on 28th January 2005) By Utkal University. Guiding As Co-Guide to Mr. B.Mohanty on " Immune Response In Various Families Of Rohu , Labeo Rohita , Exhibiting Differential Resistance to Edwardsieollosis (Awarded in 2008) **Syllabus designed** Course/syllabus of M.F.Sc and Ph.D (Fish Breeding and Genetics) of CIFE **Teaching** Teaching Fish Genetics In BJB College In Bhubaneswar As Guest Lecturer. Teaching in Vani Vihar University As Guest Lecturer In Different Refresher Courses

International recognition	• **International fund for Agriculture Research (IFAR) fellowship** by IFAR board Consultative Group of International Agriculture Research (CGIAR), Washington DC, USA • **Selected as board member of the selection committee** for International Fund for Agriculture Research (IFAR) fellowship for the years 2004-2007 by CGIAR, Washington D.C.,, USA.. • **Selected as chairperson of the selection committee** for International Fund for Agriculture Research (IFAR) fellowship for the years 2007-2010 by CGIAR, Washington D.C.,, USA.. • As a **key note speaker** in the Genetics in Aquaculture session of World Aquaculture Society conference at Hanoi, Vietnam during 5th to 8th August 2007. • **FAO consultant to Nepal** on " Genetic improvement of carps in Nepal" from 6th-26th December 2007 • **Resource person and key presenter** in the International training program on " Quantitative Genetics & application to Aquaculture" organized by WorldFish Center, Malaysia at Thailand & Sri Lanka • **Represented India as Focal point expert** in the consultative workshop on "Broodstock management and dissemination of improved fish breeds to promote aquaculture in SAARC countries" at Islamabad, Pakistan during 13-14 March 2012.
Publications	
List of Publications	Reddy, P.V.G.K., **K.D. Mahapatra**, R.K. Jana and S.D. Tripathy, 1995. Induction of triploidy in grass carp using thermal and pressure shock. **The nucleus** 38 (1, 2): 23-25. **Das Mahapatra,K.**, and B.K.Nayak,1995. Chromosomes of mitotic gynogenetic rohu (*L.rohita*) and rohu produced with fertilization with cryopreserved milt. **J.Aqua**. (3): 61-62 Reddy,P.V.G.K., **K.D.Mahapatra**, J.N.Saha and R.K.Jana, 1998. Effect of induced triploidy on growth of common carp var. Communis**. J.Aqua.Trop**. 13(1): 65-72 Gjerde, B., P.V.G.K.Reddy, M.Rye, R.K.Jana, **K.D.Mahapatra**, S.D.Gupta, J.N.Saha, M.Sahoo, S.Lenka, P.Govindswamy, S.D.Tripathi and T. Gjegrem, 1999. Genetic variation in growth

rate of Rohu (*Labeo rohita*) in mono- and polyculture systems. **Aquaculture** 173:9

Das Mahapatra,Kanta, Bjarne Gjerde, P.V.G.K.Reddy, M.Sahoo, R.K.Jana, J.N.Saha and M.Rye. 2001. Tagging: on the use of Passive Integrated Transponder (PIT) tag for identification of fishes. **Aquaculture Research** 32:47-50.

Reddy,P.V.G.K., B.Gjerde, S.D.Tripathy, R.K.Jana, **K.D.Mahapatra**, S.D.Gupta, J.N.Saha, M.Sahoo, S.Lenka and P.Govindswamy, M.Rye and T. Gjerdem. 2002. Growth and survival of six stocks of rohu (*Labeo rohita*) in mono and polyculture system. **Aquaculture,** 203 (3-4): 239-250.

Gjerde, B., P.V.G.K.Reddy, **K. Das Mahapatra**, R.K.Jana, J.N.Saha, P.K.Meher, M.Sahoo, S.Lenka, P.Govindswammy and M.Rye 2002.Growth and survival in two complete diallele crosses with five stocks of Rohu carp (*Labeo rohita*). **Aquaculture**, 209 (1-4): 103-115.

Sahoo, P.K., P.K.Meher, **K. Das Mahapatra,** J.N.saha. R.K.Jana and P.V.G.K.Reddy, 2004. Immune responses in different fullsib families of Indian Major carp, *Labeo rohita*, exhibiting differential resistance to *Aeromonas hydrophila* infection. **Aquaculture** 238 (1-4): 115-125.

Gjerde, B., **K.Das** Mahapatra, R.K.Jana, J.N.Saha and M.Rye 2005. Selective breeding in Indian Aquaculture. INFOFISH International (1): 13-15

Gjerde, B., K.Das Mahapatra, R.K.Jana, J.N.Saha and M.Rye 2005. Selective breeding improves Indian carp culture. **Global Aquaculture Advocate** 8(1):55-56

Mohanty, B.R., Sahoo, P.K., Mahapatra, K.D. and Saha, J.N., 2006. Innate immune responses in families of Indian major carp, *Labeo rohita*, differing in their resistance to *Edwardsiella tarda* infection. ***Current Science*** 92 (9) : 1270-1274

K. Das Mahapatra, J.N. Saha, N. Sarangi, R.K. Jana, B. Gjerde, N. H. Nguyen, H. L. Khaw and R.W. Ponzoni, 2007. Genetic improvement of rohu (L*abeo rohita*, ham.) through selective breeding: lessons and experiences In: Assoc. **Advancement in Animal breeding and Genetics, Australia**. 37-40.

K.Das Mahapatra, B.Gjerde, P.K.Sahoo, J.N.Saha, A.Barat, M.sahoo, B.R.Mohanty, J.odegard, M.Rye and R.Salte, 2008. Genetic variations in survival of rohu (Labeo rohita, Ham.) after A. *hydrophila* infection in challenge tests, **Aquaculture (279) : 29-34**

P.K.Sahoo, **K.Das Mahapatra**, B.Gjerde, J.N.Saha, A.Barat, M.sahoo, B.R.Mohanty, J.odegard, M.Rye and R.Salte, 2008. Family association between immune parameters and resistance to *A.hydrophila* infection in Indian major carp Labeo rohita. **Fish Shellfish Immunology 25 : 163-169**

Bindu R. Pillai, Lopamudra Sahoo, **Kanta Das Mahapatra**, Raul Ponzoni, Sovan Sahu, Swagatika Mohanty, Vijaykumar, Swagatika Sahu, 2009. Evaluation of the New Fluorescent Internal Tag (Soft Visible Implant Alphanumeric Tag) in the Freshwater Prawn, *Macrobrachium rosenbergii* . ***The Israeli Journal of Aquaculture – Bamidgeh*** *61(4), 345-350.*

Bindu R Pillai, **Kanta Das Mahapatra,** Raul Ponzoni, Lopamudra Sahoo P.L.lalringsanga, Nguyen H.Nguyen, Swagatika Mohanty Swagatika Sahu Vijaykumar Sovan Sahu,Hooi Ling Khaw, Gunamaya Patra, Sivani Pattanaik and S.C.Rath, 2011. Genetic Evaluation of a complete diallel cross involving three populations of freshwater prawn (*M.rosenbergii*) from different geographical regions of India. **Aquaculture** 319: 347-354

Mohanty B.R, P.K. Sahoo, **K.D. Mahapatra** and J.N.Saha. 2011. Differential resistance to edwardsiellosis in rohu (*Labeo rohita)* families selected previously for higher growth and/or aeromoniasis resistance. **J.Appl.Genetics**. DOI 10.1007/s13353-011-0072-y.

P.K. Sahoo, P.R. Rauta, B.R. Mohanty, **K.D. Mahapatra**, J.N.Saha, M.Rye and A.E.Eknath, 2011. Selection for improved resistance to A. hydrophila in Indian Major carp L.rohita: survival and innate immune response in first generation of resistant and susceptible lines. **Fish & Shellfish Immunology** 31: 432-438

Nicholas Robinson , Pramoda K. Sahoo , Matthew Baranski, **Kanta Das Mahapatra**, Jatindra N. Saha ,Sweta Das, Yashowant Mishra ,Paramananda Das, & Hirak K. Barman & Ambekar E. Eknath, 2012 Expressed Sequences and Polymorphisms in Rohu Carp (*Labeo rohita*, Hamilton) Revealed by mRNA-seq. **Marine Biotechnology.** DOI 10.1007/s10126-012-9433-8.

Manual	Reddy,P.V.G.K., **K.D.Mahapatra**, H.K.Barman, R.K.Jana and J.N.Saha, 1997. **Genetic improvement methods in Asiatic carps**. CIFA, Kausalyaganga. Manual series no. - 4. Reddy,P.V.G.K., B.Gjerde, **K.D.Mahapatra**, R.K.Jana ,J.N.Saha, M.Rye and P.K.Meher, 1999. **Selective breeding procedures for Asian carps**, CIFA and AKVAFORSK Publication.
Popular Article	**Das Mahapatra,K**. 1998. Genetic aspect of brood stock management: some tips to hatchery managers. **Fishing Chimes** 17(1): 35-36 **D as Mahapatra,K**. and P.V.G.K.Reddy, 2000. Production of quality carp seed – need of the hour for sustainable production. **Agri gold swarna sedya**m: 51-52 **Das Mahapatra, K.** and P.V.G.K.Reddy, 2001. Fish Genetic Resources and its future. **Indian Farming**: 38-39. **Das Mahapatra, K**., R.K.Jana and J.N.Saha 2003. Present status and strategies to improve Riverine Fish Genetic Resources of Eastern India. **Fishing Chimes** 23 (7): 37-38 P.K. Sahoo, B.N. Saragi, H. Padey and **K Das Mahapatra**, 2005 Carp nursery management by farm women. **Fishing Chimes** Vol. 25 (4) : 29-30 **K.Das Mahapatra**, R.K.Jana &J.N.Saha, 2005. Adhik Kamia Ka nam "Jayanti rohu". **Kheti (Hindi)**: 31& **K.Das Mahapatra**, 2006. Genetic research in improving fish productio (in Oriya). Matsya o ama Bikash : 12-14 **K.Das Mahapatra,** 2006. Selective breeding and its application to aquaculture. Souvenir of Orissa Fisheries Extension Officers Associations, Cuttack: 40-43 De, H.K., G.S.saha, K.Kumar and **K.D. Mahapatra**, 2008. Impact of farmers meet on popularizing jayanti rohu. **Fishing chimes** 28 (5) ; 46 **Kanta Das Mahapatra**, 2011. "Genetic tools for stock improvement in Aquaculture". Souvenir by Orissa Krushak Samaj on 16th October at Bhubaneswar.

Book / Book chapter	Book on "Breeding and seed production of finfish and shell fish" by P.C.Thomas, S.C.Rath and **Kanta Das Mahapatra. Daya publication**, New Delhi: 1-402 Edited **Chapter-22** Fish Genetics of Fish and Fishery of V.G.Jhingran book. **Das Mahapatra,K**., P.V.G.K.Reddy, J.N.Saha, S.D.Gupta, R.K.Jana & S.Lenka,1998. On the performance of PIT (Passive Integrated Transponder) tag for marking fishes-Rohu**. In: Current and emerging trend in Aquaculture**: 191-194 Reddy,P.V.G.K, B.Gjerde, **K.D.Mahapatra**, J.N.Saha, R.K.Jana, S.D.Gupta & M.Rye,1998. Selective breeding and mating designs for selection in fishes with reference to rohu *L. rohita*. **In: Fish gen. Biodiversity Cons**.: 449-456 Ayyappan, S, A.G.Ponnaiah, P.V.G.K.Reddy, R.K.Jana, **K. Das Mahapatra,** Y.Basavaraju, 2001. Aquaculture Genetic Research in India: an overview. In: M.V.Gupta and B.Acosta (eds) Fish genetics research in member countries and institutions of the International Network on Genetics in Aquaculture. ICLARM publication : 43-50 Das Mahapatra Kanta, R.K Jana. J.N.Saha, B.Gjerde and N.Sarangi, 2006. Lessons from breeding program of rohu. In: development aquatic animal genetic improvement and dissemination programs WorldFish publication**: 34-40** **K Das Mahapatra**, 2007. Statistical programs in quantitative Genetics and selective breeding studies. Bioinformatics and statistics in Fishery research Vol III, Editors AK.Roy and N.Sarangi.:484-493 **K Das Mahapatra**, 2008. Statistical programs in quantitative Genetics and selective breeding studies in fishes. Applied Bioinformatics and statistics and ecomomics in Fishery research Editors AK.Roy and N.Sarangi **New India Publishing agency**: 431-446. **Kanta Das Mahapatra**, 2011. "Genetic tools for stock improvement in Aquaculture". Souvenir by Orissa Krushak Samaj on 16th October at Bhubaneswar. **K.Das Mahapatra**, P.C.Das, P.Routray, P.Das, P.K.Sahoo, N.K.Barik & A.G Ponnaiha, 2012. . Broodstock management and dissemination

	of improved fish breeds to promote aquaculture in SAARC countries. SAARC publication
Booklet / Leaflet	Das Mahapatra Kanta, 2001. "Jayanti Rohu" (In Oriya and Hindi) Das Mahapatra Kanta, 2003. "Selective breeding of Rohu" (in English) Das Mahapatra, K., J.N.Saha, N.Sarangi & S. Ayyappan, 2008. Dissemination plan for improved rohu. Das Mahapatra, K., P.C.Das, J.N.Saha, N.K.Barik, P.P Chakraborty, Kuldeep Kumar & P. Jayasankar, 2012 " Jayanti rohu and minor carp: Exploring possibilities to enhance fish production in Northeastern India.