# **CURRICULUM VITAE**

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#### **CAREER SUMMARY**

I am a life science researcher with over 15 years of expertise in quantitative genetics, molecular biology, and fish genomics, especially Next Generation Sequencing techniques, and during my Ph.D. I have been focusing on the carp cultivated in India, which faces a gap between demand and supply, due to diseases affecting 30% of its yield. To prepare prophylaxis and effective vaccine approaches against viruses, my study to create baseline information on the ontogeny expression of antiviral genes. Further, I am very much keen to research quantitative genomics, molecular breeding, population genetics, genome sequencing, or comparative genomics. I am highly motivated to utilize my skills to pursue my research career and to contribute to the organization.

## **RESEARCH DURING Ph. D**

**Ph. D. Title** "Molecular Characterization of Antiviral Mx Gene in Catla fish (*Labeo catla*)" was being carried out at ICAR-Central Institute of Freshwater Aquaculture in Fish Health and Management Division, Kausalyaganga, Bhubaneswar-751002 Orissa, India. Supervisor: Dr. Basanta Kumar. Das (Principal Scientist, Central Institute of Freshwater Aquaculture Bhubaneswar-751002 Orissa, India)

The major objective of my Ph.D. is to produce peptides, and sequencing of this gene will give new insight for studying various aspects of disease management, including vaccination and immunization, and designing therapeutics.

- > Isolation, cloning, and characterization of antiviral gene
- > Expression of the antiviral gene in fish to bacterial and parasitic infection.

## **CURRENT STATUS**

**Project Scientist** under the National Mission for Clean Ganga (NMCG) project, Ministry of Jal Shakti, Government of India, the project entitled "Fish Stock Enhancement Including Hilsa and Livelihood Improvement for Sustainable Fisheries and Conservation in River Ganga" at ICAR – Central Inland Fisheries Research Institute, Manirampore, Barrackpore, Kolkata- 700120, WB, India

## **EDUCATIONAL QUALIFICATION**

Ph.D. (Biotechnology) Awarded from Ravenshaw University, Orissa, India, in 2023.M. Sc. (Biotechnology) From Utkal University, Orissa, India, with first division in September 2007.B. Sc. From North Orissa University, Orissa, India, with first division 2004.

# **RESEARCH EXPERIENCE**

| S No. | Position       | <b>Employer/ Organization</b>            | Responsibilities                                      |
|-------|----------------|--|---|
|       | held           |  |   |
| 01    | Project        | ICAR – Central Inland Fisheries Research | Fish Conservation and Stock Enhancement of Fishery of |
|       | Scientist      | Institute, Manirampore, Barrackpore,     | Ganga River Basin, Namami Gange Mission-II            |
|       |                | Kolkata                                  |   |
| 02    | Young          | ICAR – Central Inland Fisheries Research | Fish Stock Enhancement, Including Hilsa and           |
|       | Professional   | Institute,                               | Livelihood Improvement for Sustainable Fisheries and  |
|       | – II (YP-II)   |  | Conservation in River Ganga                           |
| 03    | Young          | ICAR – Central Inland Fisheries Research | Fish Immune gene and Stress gene standardization and  |
|       | Professional – | Institute,                               | expression  |
|       | II (YP-II)     |  |   |
|       | Young          | ICAR – Central Inland Fisheries Research | Fish Disease diagnosis from quarantine sample using   |
|       | Professional – | Institute,                               | PCR   |
|       | II (YP-II)     |  |   |
| 05    | Senior         | ICMR-Regional Medical Research Center,   | Gene cloning, RT-PCR, DNA Isolation, PCR, ELISA and   |
|       | Research       | Bhubaneswar. (Entomology division)       | sequencing etc.                                       |
|       | fellow(SRF)    |  |   |
| 06    | Senior         | ICAR-Central Institute of Freshwater     | Survey of aquaculture products                        |
|       | Research       | Aquaculture (Fish Health and Management  |   |
|       | Fellow (SRF)   | Division) Bhubaneswar.                   |   |
| 07    | Junior         | ICAR-Central Institute of Freshwater     | Gene cloning, RT-PCR, Sequencing, Northern blotting,  |
|       | Research       | Aquaculture (Fish Health and Management  | and Date analysis.                                    |
|       | fellow(JRF)    | Division) Bhubaneswar.                   |   |
| 08    | Project        | ICAR-Central Institute of Freshwater     | ESTs library construction (Normalized and Subtracted  |
|       | Assistant      | Aquaculture (Fish Genetics and           | libraries), RT-PCR, Sequencing, Hybridization         |
|       |                | Biotechnology                            | techniques,   |
|       |                | Division) Bhubaneswar.                   | data analysis, etc.                                   |
| 09    | Research       | ICMR-Regional Medical Research Center    | DNA isolation, PCR, ELISA, and sequencing, etc.       |
|       | Scholar        | (Entomology division) Bhubaneswar.       |   |

## AREAS OF RESEARCH INTEREST

- Molecular biology and Fish Pathology.
- Immunology
- Genetics and Genomics studies
- Next Generation Sequencing and Transcriptomics

# TRAINING/ WORKSHOP/ WINTER SCHOOL

| Sl no.  | Торіс                                 | Sponsored/            | Venue/held                     | Duration                                     |
|---------|---------------------------------------|-----------------------|--------------------------------|--|
|         |                                       | Organized             |                                |  |
| raining | g                                     | I                     | I                              | I  |
| 3.1     | Application of Emerging Technologies  | Department            | ICMR-National Institute        | 20 <sup>th</sup> Aug 7 <sup>th</sup> Sept.   |
|         | for the Diagnosis of Sexually         | Biotechnology (DBT)   | for Research in Reproductive   | 2007.  |
|         | Transmitted Infection                 |                       | Health (NIRRH-ICMR),           |  |
|         |                                       |                       | Mumbai.                        |  |
| 3.2     | Bioethics                             | National Institute of | St. John's National Academy    | 17 <sup>th</sup> Nov-12 <sup>th</sup> Dec    |
|         |                                       | Health (NIH) (USA)    | of Health Sciences, Bangalore. | 2008.  |
| 3.3     | Participated in the CME on            | Indian Ethics         | Department of Clinical         | 28 <sup>th</sup> Nov. 2008                   |
|         | "Perceptible Gaps in Medical          | Review Board          | Ethics at St. John's Medical   |  |
|         | Education-the Perceived Need for      | (IERB).               | College, at Bangalore.         |  |
|         | Medical Ethics Training.              |                       |                                |  |
| 3.4     | National-level model training on      | Ministry of           | Fish Management Division,      | 3-10 <sup>th</sup> Sept., 2014.              |
|         | Preventive Health Management in       | Agriculture, Govt. of | ICAR-CIFA Bhubaneswar.         | 5 10 Sept., 2014.                            |
|         | Freshwater Aquaculture                | India.                |                                |  |
| 3.5     | Online Training on "High Throughput   | Indian Council of     | Fish Genetics & Biotechnology  | $_{17}$ th $_{-20}$ th Nov                   |
|         | Sequence Data Analysis"               |                       | Division of ICAP CIEA          | 2020   |
|         |                                       | Research (ICAR)       | Bhubaneswar                    | 2020   |
| 3.6     | Assessment of Ecology and Fisheries   | ICAR- Central         | ICAR-CIFRI, Barrackpore        | 28 <sup>th</sup> -5 <sup>th</sup> Jan 2024   |
|         | of Inland Open Waters                 | Inland Fisheries      |                                |  |
|         |                                       | Research Institute    |                                |  |
| 3.7     | Recent advances in disease diagnosis  |                       |                                | 8-10 December,                               |
|         | and nanotechnology in freshwater      |                       |                                | 2020.  |
|         | aquaculture                           |                       |                                |  |
| 3.8     | Bioinformatics Tools and its          | ICAR- Central         | ICAR-CIFRI, Barrackpore        | 19-25 JANUARY                                |
|         | Application in Predictive Ecology and | Inland Fisheries      |                                | 2024   |
|         | Fisheries                             | Research Institute    |                                |  |
| Vinter  | School                                |                       |                                |  |
| 4.1     | Winter School on                      | Indian Council of     | ICAR-CIFA Bhubaneswar          | 9-29 <sup>th</sup> Nov., 2013.               |
|         | "Advances in Molecular and            | Agriculture           |                                | , ,, <u></u> 20.                             |
|         | Serological Tool in Fish Disease      | Research (ICAR).      |                                |  |
|         | Diagnosis                             |                       |                                |  |
| 4.2     | Summer/Winter School on "Advances     | Indian Council of     | ICAR-CIFRI, Fishery Resource   | 21 <sup>st</sup> Jan to 10 <sup>th</sup> Feb |
|         | in Management of Inland Open-water    |                       | and Environmental              | 2020   |
|         | Ecosystem Health"                     | Research (ICAR)       | Management Division,           |  |
|         |                                       |                       | Kolkata, West Bengal           |  |

| 5.1            | workshop on "Functional Genomics                  | Department         | Institute of Life Sciences (ILS), | 21-23, Nov.,2007                              |
|----------------|---|--------------------|-----------------------------------|---|
|                | and Evolutionary Biology"                         | Biotechnology (DBT | )Bhubaneswar                      |   |
| 5.2            | workshop on the Application of                    | -                  | Bio Axis DNA research center      | 1 <sup>st</sup> Nov., 2009                    |
|                | Bioinformatics                                    |                    |                                   |   |
| 5.3            | workshop on "Bioinformatics                       | ICAR sponsored     | ICAR-CIFA Bhubaneswar             | 12-13 Jan 2010                                |
|                | applications in fish/shellfish                    |                    |                                   |   |
|                | genomics."  |                    |                                   |   |
| 5.4            | Two days workshop on "Role of                     | ICAR-CIFA          | ICAR-CIFA Bhubaneswar             | 10-11 Sep 2024                                |
|                | Inland fisheries and aquaculture                  |                    |                                   |   |
|                | in fulfilling the Sustainable                     |                    |                                   |   |
|                | Development Goals (SDGs) and                      |                    |                                   |   |
|                | regulated of pathways (Hindi                      |                    |                                   |   |
|                | Spatha Attended)                                  |                    |                                   |   |
| 5.5            | Two days workshop on "Role of                     | ICAR-CIFA          | ICAR-CIFA Bhubaneswar             | 10-11 Sep 2024                                |
|                | Inland fisheries and aquaculture                  |                    |                                   |   |
|                | in fulfilling the Sustainable                     |                    |                                   |   |
|                | Development Goals (SDGs) and                      |                    |                                   |   |
|                | regulated of pathways (Hindi                      |                    |                                   |   |
|                | Spatha Presented)                                 |                    |                                   |   |
| Semin          | -   |                    |                                   |   |
| 6.1            | Attended National Seminar on                      |                    | Department of Bioinformatics,     | March 14 <sup>th</sup> and 15 <sup>th</sup> , |
|                | "Frontier Bioinformatics Tools in                 |                    | center for postgraduate           | 2005  |
|                | Genome and Proteome Analyses"                     |                    | studies, Orissa University of     |   |
|                |   |                    | Agriculture and Technology,       |   |
|                |   |                    | Bhubaneswar, Orissa. (OUAT)       |   |
| 6.2            | Attended an International Symposium               | 1                  | IMGENEX INDIA Pvt. Ltd.           | December 27-                                  |
|                | on "Stem Cells from Laboratory to                 |                    | Bhubaneswar                       | 28,2005                                       |
|                | Treatment of Diseases."                           |                    |                                   |   |
| <b>S</b> ympos | sium  |                    |                                   |   |
| 6.3            | Participate in the 10 <sup>th</sup> Orissa Bigyan |                    | OUAT, Bhubaneswar, Odisha         | November 4-5 2006                             |
|                | Congress on "Focal Theme: Plant                   |                    |                                   |   |
|                | Earth."   |                    |                                   |   |
| Confere        | ence  |                    |                                   |   |
| 6.4            | Attended 32 <sup>nd</sup> Annual Conference of    |                    | OUAT, Bhubaneswar, Odisha         | December 21-22,                               |
| ~              | Botanical Society                                 |                    | ,,                                | 2007 at OUAT.                                 |
| 6.5            | Attended 33 <sup>rd</sup> Annual Conference of    |                    | North Orissa University.          | January 10-11, 2009                           |
| 0.0            | Botanical Society                                 |                    |                                   | ,   |
| 6.6            | 9 <sup>th</sup> Indian Fisheries Forum (9ifaf)    | Indian Council of  | Central Marine Fisheries          | 19-23   |
| 0.0            |   | Agriculture        | Research Institute, Kochi.        | Dec.,2011                                     |
|                |   | Research (ICAR).   | Research Institute, Roem.         |   |
|                |   | Nestartii (ICAR).  |                                   |   |

| 6.7     | 10 <sup>th</sup> Indian Fisheries and Aquaculture | Indian Council of     | ICAR-National Bureau of Fish   | 12-15 Nov., 2014                            |
|---------|---|-----------------------|--------------------------------|---|
|         | Forum (10ifaf)                                    | Agriculture           | Genetic Resources, Lucknow.    |   |
|         |   | Research (ICAR).      |                                |   |
| 6.8     | International Consultant Meeting on               |                       | Fish Genetics & Biotechnology  | 23 <sup>rd</sup> Jan 2015                   |
|         | "Fish Genomics"                                   |                       | Division of ICAR- CIFA,        |   |
|         |   |                       | Bhubaneswar                    |   |
| 6.9     | National Conference on Trends and                 | Zoological Soceity of | Post Graduate Department of    | 5th & 6 <sup>th</sup>                       |
|         | Progress of Animal Sciences                       | Orissa (ZSO)          | Biosciences and Biotechnology, | February 2020                               |
|         |   |                       | Fakir Mohan University         |   |
| 6.10    | 20 Indian Science Communication                   | Indian Science        | HNB Garhwal Central            | 20 December, 2020                           |
|         | Congress  | Writers Association   | University                     |   |
|         |   | Indian Science        |                                |   |
|         |   | Communication         |                                |   |
|         |   | Society               |                                |   |
| 6.11    | 1 <sup>st</sup> Indian Fisheries Outlook 2022     | ICAR- Central         | ICAR-CIFRI, Barrackpore,       | 22-24 March 2022                            |
|         |   | Inland Fisheries      | Kolkata, West Bengal           |   |
|         |   | Research Institute    |                                |   |
| 6.12    |   |                       |                                | 22-24 March 2022                            |
| 6.13    | 13 <sup>th</sup> IFAF-Fostering Indian Fisheries  |                       | Kolkata, India                 | 23-25 Fb 2024                               |
|         | and Aquaculture for Attaining                     |                       |                                |   |
|         | Sustainable Development Goals                     |                       |                                |   |
| Webinar |   |                       | I                              | 1   |
| 6.14    | International webinar on "Exploring               | ICAR-CIFRI,           | ICAR-CIFRI, Kolkata, West      | 24 <sup>th</sup> and 25 <sup>th</sup> Aug., |
|         | the impact of COVID-19 on the                     | NMCG, IFSI, PFGF      | Bengal                         | 2020  |
|         | ecosystem health of rivers and its                | and AEHMS             |                                |   |
|         | dolphin population: present status                |                       |                                |   |
|         | and future strategy for conservation in           |                       |                                |   |
|         | India-Bangladesh- Myanmar-Nepal                   |                       |                                |   |
| 6.15    | International webinar on "Small Scale             | Indian Council of     | ICAR-CIFRI, Kolkata, West      | 9 <sup>th</sup> and 10 <sup>th</sup> Sep.,  |
|         | Fisheries in Inland Open Waters:                  | Agriculture           | Bengal                         | 2020  |
|         | Status and Opportunities."                        | Research (ICAR)       |                                |   |
| 6.16    | National Webinar on Recent Advances               | Fakir Mohan           | Department of Zoology, fakir   | 30 <sup>th</sup> June 2021                  |
|         | in Breeding of Commercially                       | Autonomous            | Mohan Autonomous College,      |   |
|         | Important Fish Species.                           | College, Balasore,    | Balasore.                      |   |
|         |   | Odisha.               |                                |   |
| 6.17    | Disease and Health Management in                  | Marsco Aqua Clinics   | Marsco Aqua Clinics            | 05 July 2021                                |
|         |   | 1                     | 1                              |   |
|         | Aquaculture & Culture of Marine Fish              | – Aqua One Centre     |                                |   |

| 6.18 | National webinar on Freshwater       | Marsco Aqua Clinics   | Marsco Aqua Clinics Pvt Ltd.   | 13 <sup>th</sup> August 2021    |
|------|--------------------------------------|-----------------------|--|---------------------------------|
|      | Ornamental Fish Breeding & Shrimp    | – Aqua One Centre     |  |                                 |
|      | Culture of <i>L. Vannamei</i>        |                       |  |                                 |
| 6.19 | Webinar on Fish as Nutritional Food  | NFDB & MANAGE,        | Aqua One Center (AOC,  | 25 <sup>th</sup> September 2021 |
|      |                                      | Hyderabad under       | Kolkata)   |                                 |
|      |                                      | "Rashtriya Poshan     |  |                                 |
|      |                                      | Maah 2021             |  |                                 |
| 6.20 | National webinar on Molecular        | Marsco Aqua Clinics   |  | 25 <sup>th</sup> September 2021 |
|      | Diagnosis of Disease Management in   | L                     |  |                                 |
|      | Freshwater Aquaculture and Water     | •                     |  |                                 |
|      | quality management in Aquaculture    |                       |  |                                 |
| 6.21 | Global Meet for                      | Indian Network for 1  | Neglected Tropical Diseases  | 28 <sup>th</sup> Sep 2021       |
|      | Containment of Rabies                | (iNTD)                |  |                                 |
|      |                                      | In collaboration with | n Swiss Alliance for Neglected   |                                 |
|      |                                      | Tropical Diseases (SA | ANTD)  |                                 |
| 6.22 | Application of Nanobiosensors        | PP Savani             |  | 13 <sup>th</sup> October 2021   |
|      | techniques in pathogenic and         | University            |  |                                 |
|      | pollutant diagnosis"                 |                       |  |                                 |
| 6.23 | National Webinar on Grow out culture | Marsco Aqua Clinics   | Marsco Aqua Clinics Pvt Ltd.   | 18th October 2021               |
|      | of Indian Major Carp & Brackish      | L                     |  |                                 |
|      | Water Cage Culture                   |                       |  |                                 |
| 6.24 | National Webinar on Integrated       | Marsco Aqua Clinics   | Marsco Aqua Clinics Pvt Ltd.   | 20 <sup>th</sup> November 2021  |
|      | Aquaculture & RAS Culture            |                       |  |                                 |
| 6.25 | National webinar on Feed formulation | Marsco Aqua Clinics   | Marsco Aqua Clinics Pvt Ltd  | 29 <sup>th</sup> Dec 2021       |
| 00   | and Feed Management in Freshwater    |                       | in the second se |                                 |
|      | Aquaculture and Inland cage Culture  |                       |  |                                 |
|      | Inquactante una infund cuge culture  |                       |  |                                 |

# AREA OF EXPERTISE

## Molecular biology:

- Semi-quantitative RT-PCR for gene expression study, Designed the primers, RACE PCR, Real-Time PCR, Blotting, ELISA, Immunohistochemistry, PAGE, Gene cloning, DNA sequencing data analysis by BLAST X, BLAST N MEGA BLAST, CLUSTAL-W, cap3, Gene Ontology, etc., Identification of microsatellite, Maintenance of EST data and clones, etc. SNP analysis and Next Generation sequencing data analysis.
- > Idea on the use of some of the freely downloadable and routinely used bioinformatics software.

# Immunology:

- During the last year, I have gained knowledge on the specific immunity of fish through various techniques such as NBT, phagocytosis, myeloperoxidase assay, bactericidal study, etc.
- Idea on certain haemotaological parameters, e.g., WBC, RBC count, estimation of Hb conc., total protein albumin, globulin etc.

# Microbiology/Fish Pathology:

- Isolation and enrichment of various fish pathogens like A. hydrophila, Vibrio paraheamolyticus, V. alginotocus, Pseudomonas Sps.; some fungal pathogens.
- Molecular characterization of the parasite by 28S rDNA sequencing, RAPD and RFLP.

## SCIENTIFIC MEMBERSHIPS

- 1. Enrolled as a Life Member of the Orissa Botanical Society from the year 2007
- 2. Enrolled as a Life Member of Orissa Bigyan Academy, Department of Science & Technology, Government of Orissa, from the year 2008
- 3. Enrolled as a life Member of the Biotechnology and Bioinformatic Society from the year 2021
- 4. Enrolled as a Life Member of The Indian Science Congress Association from the year 2023
- Enrolled as a Life member of the Inland Fisheries Society of India from the year 2024 (Life Membership No. 470)

# SCIENTIFIC COLLABORATION

- Fish Genetics and Biotechnology Division / Aquaculture Production and Environment Division / Fish Health Management Division of ICAR - Central Institute of Freshwater Aquaculture (ICAR-CIFA), Kausalyaganga, Bhubaneswar, Orissa, 75 1002, India
- 2. Clinical Entomology Division / Biomedical Informatics Centre of Regional Medical Research Centre **(ICMR-RMRC)**, Bhubaneswar, Orissa 75 1023, India
- 3. Fish Molecular Genetics and Biotechnology Laboratory, Aquatic Genomics Unit, Department of Fisheries and Allied Aquacultures, Auburn University, **Auburn, AL 36849, USA**
- 4. School of Biotechnology, KIIT University, Bhubaneswar, India
- 5. Division of Fisheries Science, ICAR-Central Island Agricultural Research Institute (ICAR-CIARI), Port Blair, A&N Island.
- 6. Aquatic Environment and Health Management Division, ICAR-Central Institute of Fisheries Education **(ICAR-CIFE)**, Versova, Mumbai.
- 7. Biotechnology Laboratory, ICAR-Central Inland Fisheries Research Institute (ICAR-CIFRI), Barrackpore, Kolkata, 700120, West Bengal, India.
- 8. Department of Chemistry, Technical University of Denmark, DK-2800, Kongens Lyngby, **Denmark**
- 9. Department of Bioinformatics, Orissa University of Agriculture and Technology **(OUAT)**, Bhubaneswar 751003, Odisha, India
- 10. **KBDAV College**, Nirakarpur, Odisha, India.

## **RESEARCH PUBLICATION**

<sup>1.</sup> Mohapatra N, Panda SP, A. S. Acharya AS, Hazra RK, S. K. Parida SK, Marai N, Kar SK, Mahapatra A, Narasimhan K, Mohapatra S, Mallavadhani UV. (2009) Toxicological Response of *Culex quinquesfasciatus* (Say) and *Anopheles stephensi* (Liston) to two different plant extract Journal of Current sciences. volume 14 No.1

- Sahu DK, Panda SP, Panda S, Das P, Meher PK, Hazra RK, Peatman E, Liu Z, Eknath AE and Nandi S. (2013) Identification of reproduction-related genes and SSR-markers through expressed sequence tags analysis of a monsoon breeding carp rohu, Labeo rohita (Hamilton). Gene, (524) 1–14. https://www.ncbi.nlm.nih.gov/pubmed/23583682
- Roy P, Panda SP, Sethi S, Rana N and Das BK. (2014) Morphometric and molecular identification of isopod parasite joryma hilsae in *pellona ditchela* (val 1847) Journal of Aquaculture in the Tropics Vol. 30, Iss,1/2, (2015): 15-21. <u>https://www.proquest.com/scholarly-journals/morphometric-molecularidentification-isopod/docview/1752117633/se-2</u>
- 4. Sahu, DK, **Panda SP**, Mehe PK, Das P, Routray P, Sundaray JK, Jayasankar P, Nandi S. (2015) Construction, de-novo assembly and analysis of transcriptome for Identification of reproduction-related genes and pathways from rohu, *Labeo rohita* (Hamilton) PloS one, 10(7)1-27 <u>https://doi.org/10.1371/journal.pone.0132450</u>
- Roy P, Panda SP, Pal A, Mishra SS, Jayasankar P and Das BK. (2015) Expression of Mx Gene in *Cirrhinus Mrigala* (Hamilton, 1822) to OMP C Protein of *Aeromonas Hydrophila* and Bacterial Infection. Applied Biochemistry and Biotechnology. 178, 640–653. DOI: <u>10.1007/s12010-015-1899-1</u>
- 6. Baruah A, Das R, Kumar S, Roy P, Sahu A, **Panda SP**, Mishra SS and Das BK A (2016) Novel and effective clostridium bifermentans CPSS2 against selected fish pathogenic Bacteria. International Journal of Advanced Research (IJAR) 4 (9) 2140-2150 <u>http://dx.doi.org/10.21474/IJAR01/1700</u>
- Roy P, Panda SP, Pal A, Jayasankar P & Das BK. (2016) Ontogenetic profile of Antiviral Mx gene and its role in innate immunity in Mrigal, Cirrhinus mrigala (Hamilton 1822). Aquaculture Research, <u>Volume 48</u>, <u>Issue 6</u> p. 3230-3243 <u>https://doi.org/10.1111/are.13153</u>
- Das BK, Roy P, Rout AK, Sahoo DR, Panda SP, Pattanaik S, Dehury B, Behera BK & Mishra SS. (2019) Molecular cloning, GTP recognition mechanism and tissue-specific expression profiling of myxovirus resistance (Mx) protein in *Labeo rohita* (Hamilton) after poly I: C induction. Scientific Reports, 9: 3956 1-19 <u>https://www.nature.com/articles/s41598-019-40323-0.pdf</u>
- Roy P, Rout AK, Maharana J, Sahoo DR, Panda SP, Pal A, Nayak KK, Behera BK, Das BK. (2019) Molecular characterization, constitutive expression, and GTP binding mechanism of *Cirrhinus mrigala* (Hamilton, 1822) Myxovirus resistance (Mx) protein. International Journal of Biological Macromolecules. 136, 1258-1272 https://doi.org/10.1016/j.ijbiomac.2019.06.161

- Mohanty D, Roy P. Sahu A, Panda SP, Sahoo AK, Das BK., (2021) Subcellular component of *Bacillus subtilis* (AN11) induces protective immunity against *Aeromonas hydrophila* in *Labeo rohita* (Ham.). Aquaculture Research. DOI: 10.1111/are.15578 2021;00:1–10.
- Panda SP, Soren D and Das BK., (2021) Haemato-immunological responses of *Labeo catla* (Hamilton, 1822) induced with poly I:C. Journal of the Inland Fisheries Society of India (JIFSI). 53 (1) <a href="https://doi.org/10.47780/jifsi.53.1-2.2021.115782">https://doi.org/10.47780/jifsi.53.1-2.2021.115782</a>
- Panda SP, Soren D, Nayak KK. Roy P. Das BK., (2021) Poly I: C stimulates Mx transcript and promotes an antiviral state in the blood of *Labeo catla* (Hamilton 1822). Indian J. Fish., 68(3): 93-99, 2021 DOI: 10.21077/ijf.2021.68.3.112825-12
- Chakraborty N, Das BK, Bera AK, Borah S., Mohanty D., Yadav AK, Kumar J., Koushlesh SK., Chanu TN., Panda SP., Vallangi R.,(2022) Co-Prevalence of Virulence and Pathogenic Potential in Multiple Antibiotic Resistant Aeromonas spp. from Diseased Fishes with In Silico Insight on the Virulent Protein Network. Life, 2022, 12, 1979. <u>https://doi.org/10.3390/life12121979</u>
- Meena DK., Panda SP, Sahoo AK., Srivastava PP., Sahu NP., Kumari M., Samantray S., Borah S., Das BK.,(2023) Immunogenic Effects of Dietary Terminalia arjuna Bark Powder in Labeo rohita, a Fish Model: Elucidated by an Integrated Biomarker Response Approach. Animals 2023, 13, 39. <u>https://doi.org/10.3390/ani13010039</u>
- *15.* **Panda SP**, Roy P., Soren D., Sahoo DR., Dehury B., Rout AK., Behera BK & Das BK., (2023) Structural insights of *Labeo catla* (catla) myxovirus resistance protein, GTP binding recognition and constitutive expression induced with Poly I: C. Journal of Biomolecular Structure and Dynamics.
- 16. Das K, Mishra CSK, Champatiray S, Jena M, Panda SP, and Roy P (2023) Green Synthesis of Silver Nanoparticles from (*Tectona Grandis Linn.*) Teak Leaves and its Phytostimulatory Effect on Vigna Radiata. BioMedical Journal of Science and Technical Research
- 17. Panda SP, Soren D, Roy P, Mohanty D, Meena DK, Amiya Kumar Sahoo AK, Das BK., (2023). Immunomodulatory effect of saponin treatment and microbial infections provoke the expression of the Mx gene in catla (Labeo catla). Aquaculture International
- Ray A, Das BK, Bhakta D, Johnson C, Roy S, Subhadeep Das Gupta SD, Panda SP and Baitha R (2023) Stock Status of a Few Small Indigenous Fish Species Exploited in the River Ganga, India. Fishes
- 19. Roy A., Kumar V., Bisai K., Bhowall P., **Panda SP**., Jana AK., Banerjee R., and Das BK., (2024) Molecular characterization and expression profile of estrogen receptor subtypes in female hilsa (Tenualosa ilisha). Frontiers in Marine Science

20. Das BK, **Panda SP**, Pradhan SP, Raut SS, Kumari M., and Meena DK (2024) Molecular insights into STAT1a protein in rohu (*Labeo rohita*): unveiling expression profiles, SRC homology domain recognition, and protein-protein interactions triggered by poly I: C. Frontiers in Immunology

## **BOOK EDITED**

 B. K Das, S. P. Panda, and S. Bhattacharya., 2025. Drivers in Biological Science Towards Sustainability. Book Citation Index. Edited book, Narendra Publication House Delhi (India) pp. 1 – 213, ISBN:978-93-56513-79-2

https://www.nphindia.com/book/9789356513792/drivers-in-biological-sciences-towards-sustainability

## **BOOK CHAPTER**

- Rout AK., Das R., Mahanandia NC., Dey S., Parida SN., Mondal M., Panda SP., Jena Rajkumar., Behera B., and Behera BK., (2024) Identifying Novel Antibiotic Resistance Genes (ARGs): Important Aspect of Metagenomic Research. Biotechnological Tools in Fisheries and Aquatic Health Management (Springer Nature)
- 2. **S P Panda**, D. Soren<sup>,</sup> P. Malakar, V. Kumar, B.K. Das (2025) Role of Artificial Intelligence in Fish Disease Modeling and Prognosis. Laboratory Techniques for Fish Disease Diagnosis. (Springer Nature)
- 3. **S P Panda**, D. Soren<sup>,</sup> P. Malakar, V. Kumar, B.K. Das (2025). Ethical and Legal Considerations in Aquatic Genomics Research. (Springer Nature)

#### GENE SEQUENCE SUBMITTED IN THE NCBI DATABASE

Complete nucleotide sequence – 10, ESTs Sequence- 4662. Partial sequence- 200, Ribosomal sequence (16s, 18s, 28s) – 168, SRA Submission – 02, <u>In total NCBI submission **5042**</u>

## **EDITOR/ PEER-REVIEWER RECOGNITION**

- **Peer Reviewer:** Frontiers in Physiology, Frontiers in Marine Science, Frontiers in Genetics, Mitochondrial DNA Part B: Resources, Aquaculture (MDPI), Biology (MDPI), Forensic sciences (MDPI), Genes (MDPI), International Journal of Molecular Sciences (MDPI), Journal of marine science and engineering (MDPI), Sustainability (MDPI), Symmetry (MDPI)
- **Editor**: Served as an editorial board member of several reputed journals, including Frontiers, MDPI, Wiley, Springer, etc

#### **ACHIEVEMENTS**

- 1. **Patent**: Fish feed for *Clarias magur* comprising of raw ingredients (Application No. 202431003310A Date of filing 17/01/2024).
- 2. **Sardar Patel Outstanding** ICAR Institution Award 2020 (Large Institute) for valued contribution by the Indian Council of Agricultural Research, New Delhi.
- 3. Received **Best Poster Presentation** Award at Research Scholars Conclave-2022 held from 4<sup>th</sup> November 2022 at Fakir Mohan University, Balasore, Odisha.

4. Received **Appreciation Award** on 1<sup>st</sup> Indian Fisheries Outlook 2022 during 22-24 March 2022 at ICAR-Central Inland Fisheries Research Institute, Barrackpore, Kolkata.

## **RESOURCE PERSON**

I worked as a research person at the International Workshop on Biotechnology in Fisheries and Aquaculture held at ICAR-Central Institute of Freshwater Aquaculture (Fish Health and Management Division) Bhubaneswar. during June 19-21, 2014

## EXTRACURRICULAR ACTIVITY

I had also associated with Utkal Sevak Samaj (a state-level NGO). My Responsibilities were to be aware of immune deficiency people and motivation, Community mobilization, Training on leadership development, Gender, Social Security rights, etc. To form SHG groups among people with immune deficiency people to provide financial support and Technical expertise to prompt their livelihood. Communicate with the funders and GOVT officials in the operational area.

#### **PERSONAL SKILLS**

- Attitude toward learning Continuously
- Ability Towards in a team-oriented environment

#### **PERSONAL INFORMATION**

| Father's name         | : | Madan Mohan Panda  |
|-----------------------|---|--|
| Data Date of birth    | : | 8 <sup>th</sup> November 1982                            |
| Sex                   | : | Male   |
| Nationality           | : | Indian   |
| Religion              | : | Hinduism   |
| Marital Status        | : | Unmarred   |
| Language Known        | : | Odia, Hindi, English, Bengali (Beginner)                 |
| Hobbies & Interest    | : | Making scientific projects, interpersonal relationships, |
|                       |   | Reading, Writing scientific articles, Social service     |
| Research Gate Profile | : | https://www.researchgate.net/profile/Soumya-Panda-7      |
| ORCID ID              | : | https://orcid.org/my-orcid?orcid=0000-0002-0513-1101     |

#### DECLARATION

I declare that the above-furnished information is accurate to my knowledge and belief. If I am given an opportunity to work in your esteemed organization, I promise to do it with dedication.

Yours Truly,

Place:14/03/2025 Date: Barrackpore, Kolkata

Soumya Prased Panda.

(Soumya Prasad Panda)