



CURRICULLUM VITAE
MOHD ASHRAF RATHER
((B.FSc. M.FSc. Ph.D. NPDF)
Assistant professor

**Research interest: Functional genomics, Nanobiotechnology,
Computational biology**

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1.PRESENT ADDRESS

College of Fisheries, Ratnagiri
B4 Quarter Room No.7, Maharashtra
-India 415629

2. BIOGRAPHICAL DATA

Birth date: 08/ 09/1985

Citizenship: India

3.ACADEMIC QUALIFICATION

Master: Division of Genetics and Biotechnology, Central Institute of Fisheries
Education, Mumbai India

Ph.D: Division of Genetics and Biotechnology-2014 Central Institute of Fisheries
Education, Mumbai India

4. PROFESSIONAL EXPERIENCE

- 5 year of working experience in molecular biology and different biotechnology tools
- 3 month research experience in different bioinformatics tools in Innovative Informatica Technologies Hyderabad, India.
- Attended 30 days training on Proteomics in Rishi Biotech Company Mumbai India.
- Attended 3 days workshop on international workshop on Fish Genomics 2015- Mumbai

- Attended 3 days training on the nanotechnology in Anna University, Tamil Nadu, India
- Participation in national workshop on “Scientific/Research paper writing organized by National academy (NASI) of science, India- 08-12- 2012
- Attend Training on “ Development of Brood and Gene banks for aquaculture production and genetics conservation organized by CIFE, 8-28-12
- Participated in the training session on “HOW TO PRPARE RESEACH POSTER FOR SEMINARS AND SYMPOSIA” CIFE, 30/7/2008

5.HORNORS AND AWARDS

- Young scientist award 2017 from society of Fisheries and Life science, College of Fisheries, Mangalore.
- Best university research paper award from Dr.B.S.K.K.V-Dapoli university, Ratnagiri- Maharashtra with cash prize of 25, 000.
- Highest impact factor research paper publication award 2016 from CIFE, Mumbai
- Dr. Karunasagar Best Post-Graduate Thesis (Ph.D. – Indian category) Award for the year 2015 from Professional Fisheries Graduates Forum (PFGF)
- Prof. K. H. Alikunhi Best Ph.D student Gold medal thesis award 2014-15 from Central Institute of Fisheries Education(CIFE), Mumbai, India
- Highest impact factor Reseach paper publication award 2013 from C.I.F. E
- Secured 1st rank in Asia-Pacific Alltech Young Scientist competition and was award best Young Scientist Award in Asia- Pacific-2012 in agriculture and allied field by USA Alltech Company.

6.FELLOWSHIPS

- Indian science academy summer research fellowship-2018
- Secured 1st rank in All India Combined Examination 2011 for Senior Research Fellowship (SRF) conducted by Indian Council of Agricultural Research (ICAR), New Delhi and subsequently awarded with CIFE Fellowship for pursuing Ph.D in Central Institute of Fisheries Education, Mumbai India.
- Secured 1st rank in All India Combined Examination 2008 for Junior Research Fellowship (JRF) conducted by Indian Council of Agricultural

Research (ICAR), New Delhi and subsequently awarded with CIFE Fellowship for pursuing post-graduation in Central Institute of Fisheries Education, Mumbai India.

- Awarded Prince Sangkola fellowship by Prince Sangkola University Thailand for pursuing Ph.D in 2011

7. TECHNICAL SKILLS:

- Expertise in DNA, RNA isolation, PCR, Gel Electrophoresis (Agarose and Polyacrylamide), Western blot, Transformation, Real Time PCR and Cloning.
- Sound experiences with Molleller, Pymol, Discovery studio software's molecular docking software's and biological database
- Familiar with application of primer designing software Gene Runner, CLUSTAL W, BLAST software, Statistical analysis software(SPSS)
- Expertise in development and characterization of organic and inorganic nanoparticles.

8. MASTER DISSERTATION TITLE: Development of polymer based pituitary hormone nanoparticles for fish breeding

9. Ph.D. THESIS TITLE: Identification, characterization and expression profiling of kisspeptin gene in *Catla catla* (Hamilton, 1822)

10. PATENTS/ PRODUCTS/ TECHNOLOGIES DEVELOPED

More than 20 gene sequences have been published in NCBI (Genebank) related with genetics and reproduction physiology of fish.

11. RESEARCH GRANTS/PROJECTS

ROLE OF ESTROGEN, ANDROGEN, AROMATASE AND THEIR RECEPTOR IN THE SEXUAL DIFFERENTIATION IN FISH"-2016 (19.26 lakhs) from Science and Engineering Research Board, Department of Science and Technology, India

12. INTERNATIONAL PUBLICATIONS

Mohd Ashraf Rather, Syed Hussain Basha, Irfan Ahmad Bhat, Niti Sharma, Priyanka Nandanpawar, Mohan Badhe, Jitendra Kumar Sundaray and Rupam Sharma-2017. Characterization, molecular docking, dynamics simulation and metadynamics of kisspeptin receptor with kisspeptin. *International Journal of*

***Biological Macromolecules* 101: 241-253(Impact Factor: 3.9 Naas rating : 9.67)**

Mohd Ashraf Rather, Irfan Ahmad Bhat, Gireesh-Babu P, Aparna Chaudhari Jeetendra Kumar Sundaray and Rupam Sharma. 2016. In silico analysis and expression studies of Kisspeptin gene in fish. ***Journal of Biomolecular Structure & Dynamics Vol 1:1-12 (Impact Factor: 2.3 Naas rating: 9.12)***

Mohd Ashraf Rather, Irfan Ahmad Bhat, Gireesh-Babu P, Aparna Chaudhari Jeetendra Kumar Sundaray and Rupam Sharma. 2016. Molecular characterization of kisspeptin gene and effect of nanoencapsulated kisspeptin-10 on reproductive maturation in *Catla catla*. ***Domestic Animal Endocrinology, Vol 56 pp 36 -47 (Impact Factor: 2.12 Naas rating: 7.64)***

Mohd Ashraf Rather, Rupam Sharma, Subodh Gupta, Ferose khan, V. L. Ramya and Sanjay B Jadhao 2013. Chitosan nanoconjugated hormone nanoparticles for sustained surge of gonadotropins and enhanced reproductive output in female fish. ***PLOS ONE, Vol. 8 (2), pp1-10 (Impact Factor: 3.2, Naas rating: 8.81)***

Mohd Ashraf Rather, Irfan Ahmad Bhat, Nit Sharma, Rupam Sharma, Gireesh-Babu P, Aparna Chaudhari, Jeetendra Kumar Sundaray. 2014 Molecular characterization, tissue distribution of Follicle-Stimulating Hormone (FSH) beta subunit and effect of kisspeptin-10 on reproductive hormonal profile of *Catla catla* (Hamilton, 1822). ***Aquaculture Research. Vol 2 pp 1–12 (Impact Factor: 1.46 Naas rating: 7.46)***

Mohd Ashraf Rather, Irfan Ahmad Bhat, Niti Sharma, Adnan Gora, Parvaiz Ahmad Ganie, and Rupam Sharma. 2016. Synthesis and characterization of Azadirachta indica constructed silver nanoparticles and their immunomodulatory activity in fish. ***Aquaculture Research. Vol 8: 3742–3754(Impact Factor: 1.46 Naas rating: 7.46)***

Mohd Ashraf Rather, Irfan Ahmad Bhat, Rupam Sharma. 2015 Identification, cDNA cloning and characterization of luteinizing hormone beta subunit gene (lhb) in *Catla catla*. ***Animal Biotechnology ,Vol 27 pp 48- 56(Impact Factor: 0.75 Naas rating: 6.75)***

Niti Sharma, **Mohd Ashraf Rather**, Gireesh-Babu P., Kundan Kumar, Malachy N.O. Ajima and Rupam Sharma 2016. Assessment of DNA damage and molecular responses in *Labeo rohita* (Hamilton, 1822) following short-term exposure to silver nanoparticles. ***Food and chemical toxicology, Vol 96 pp 96-122 (Impact Factor: 3.6 Naas rating: 9.7)***

Irfan Ahmad Bhat, **Mohd Ashraf Rather**, Gireesh-Babu P, and Rupam Sharma. 2016 Expression analysis of Sox9 genes during annual reproductive cycles in gonads

- and after nanodelivery of LHRH in *Clarias batrachus*. ***Research in Veterinary Science*. Vol 101 pp 100-106 (Impact Factor: 1.51 Naas rating: 7.3)**
- Bhat, Irfan Ahmad, **Mohd Ashraf Rather**, Mir Ishfaq Nazir, Gireesh-Babu Pathakota, Mukunda Goswami, J. K. Sundaray, and Rupam Sharma. (2018): "Cloning, characterisation, docking and expression analysis of 3-beta-hydroxysteroid dehydrogenase during ontogenetic development and annual reproductive cycles in catfish, *Clarias batrachus*." ***Theriogenology* 105 34-44. (Impact Factor: 1.98 Naas rating: 7.99)**
- Mohd Ashraf Rather**, Irfan Ahmad Bhat and Rupam Sharma. 2015. Identification and characterization of chickenII-GnRH (cII-GnRH) gene of *Catla catla* (Hamilton, 1822) ***European Journal of Experimental Biology Vol 5(2):53-56***
- Bhat, Irfan Ahmad, **Mohd Ashraf Rather**, Pravesh Kumar Rathor, P. Gireesh-Babu, Mukunda Goswami, J. K. Sundaray, and Rupam Sharma. (2017): "Cloning, expression, molecular modelling and docking analysis of steroidogenic acute regulatory protein (StAR) in *Clarias batrachus*." ***Genes & Genomics* 1-15. (Impact Factor: 0.5)**
- Bhat, Irfan Ahmad, **Mohd Ashraf Rather**, Mir Ishfaq Nazir, Gireesh-Babu Pathakota, Mukunda Goswami, J. K. Sundaray, and Rupam Sharma. (2018): "Cloning, characterisation, docking and expression analysis of 3-beta-hydroxysteroid dehydrogenase during ontogenetic development and annual reproductive cycles in catfish, *Clarias batrachus*." ***Theriogenology* 105 34-44. (Impact Factor: 1.98)**
- Rathor, Pravesh Kumar, Irfan Ahmad Bhat, **Mohd Ashraf Rather**, Pathakota Gireesh-Babu, Kundan Kumar, Suresh Babu Padinhate Purayil, and Rupam Sharma. (2017): "Steroidogenic acute regulatory protein (StAR) gene expression construct: Development, nanodelivery and effect on reproduction in air-breathing catfish, *Clarias batrachus*." ***International Journal of Biological Macromolecules* 104 1082-1090. (Impact Factor: 3.67)**
- Mohd Ashraf Rather**, Rupam Sharma, M Aklakur, Shabir Ahmad, Neeraj Kumar, Mujahid Khan, V.L. Ramya 2011. Nanotechnology: A novel tool for Aquaculture and Fisheries development a prospective mini-review. ***Fisheries and Aquaculture Journal* (E- ISSN: 21503508) Vol 16.pp1-7**
- Mohd Ashraf Rather**, Rupam Sharma, V.L. Ramya and Shabir Ahmad Dar-2012. Rapid Nucleic acid based diagnostic and therapeutic methods for aquatic animals. ***The Israeli Journal of Aquaculture - Bamidgeh, Vol 64: 11-26 (Impact Factor: 0.9)***
- Niti Sharma, **Mohd Ashraf Rather**, Gireesh-Babu P., Kundan Kumar, Malachy N.O. Ajima and Rupam Sharma 2016. Assessment of DNA damage and molecular responses in *Labeo rohita* (Hamilton, 1822) following short-term exposure to

- silver nanoparticles. *Food and chemical toxicology*, Vol 96 pp 96-122 (**Impact Factor: 3.6**)
- Irfan Ahmad Bhat, **Mohd Ashraf Rather**, Gireesh-Babu P, and Rupam Sharma. 2016 Expression analysis of Sox9 genes during annual reproductive cycles in gonads and after nanodelivery of LHRH in *Clarias batrachus*. *Research in Veterinary Science*. Vol 101 pp 100-106 (**Impact Factor: 1.51**)
- Irfan Ahmad Bhat, **Mohd Ashraf Rather**, Jaffer Yousuf Dar, and Rupam Sharma. 2016. Molecular cloning, computational analysis and expression pattern of forkhead box12 (Foxl2) gene in catfish. *Computational biology and chemistry* 64 Vol 64 pp 9-18. (**Impact Factor: 1.11**)
- Rupam Sharma, **Mohd Ashraf Rather**, Ramya V.L., Himadri Saha, Suresh Babu P. P., Shabir A. Dar and Sukham Munilkumar-2012. Preliminary observations on the effect of nanoconjugated pheromones on *Clarias batrachus*. *Aquaculture Research*. Vol 5 pp-16 (**Impact Factor: 1.3**)
- Ramya V.L., Rupam Sharma, Gireesh Babu Pathakota, **Mohd Ashraf Rather**, Priyanka C. Nandanpawar and E. Suresh - 2013. Development of polymer based DNA-nano construct against nodavirus *Macrobrachium rosenbergii* . *J. of Fish diseases*. Vol 11-1-11 (**Impact Factor: 1.5**)
- Ferosekhan, S., Subodh gupta, Arvind singh, **Mohd Ashraf rather**, Rakhi kumari, A.K.Pal & S.B. Jadhao 2014. Nanoencapsulation with chitosan biopotentiates growth and immunostimulatory properties of dietary yeast-RNA in fish. *Current Nanoscience* Vol 12 pp. 453-464 (**Impact Factor: 1. 4.**)
- Udit U. K., A. K. Reddy, P. Kumar, **M. A. Rather**, R. Das and D. K. Singh. 2014. Induced breeding, embryonic and larval development of critically endangered fish *puntius sarana* (Hamilton, 1822) under captive condition. *The Journal of Animal & Plant Sciences*, Vol 24(1) pp 156-66 (**Impact Factor: 0.54**)
- Choudhary, N., Sharma, R., Asthana, S., Vyas, P.A., **Rather, M. A.**, Reddy, A.K. and Krishna, G. 2013. Development of Karyotype and localisation of cytogenetic markers in Dimua River prawn *Macrobrachium villosimanus* (Tiwari, 1949). Pakistan. *Journal of Biological Science*, vol 8 pp 1-10.
- Md Aklakur **Mohd Ashraf Rather** and Neeraj Kumar. 2015 Nano delivery: An emerging avenue for nutraceuticals and drug delivery in aquatic animal. *Critical Reviews in Food Science and Nutrition*. Vol 56 pp 52-61 (**Impact Factor: 5.5**)
- Sagar C. Mandal, S. Khogen Singh, Pronob Das, **Mohd Ashraf Rather** Debtanu Barman 2012. Effect of dietary eicosapentaenoic acid/docosahexaenoic acid and vitamin E on the reproductive performance and gonadal fatty acid composition of *Betta splendens*. *The Israeli Journal of Aquaculture* - Vol 64 pp1-10 (**Impact Factor: 0.9**)

Rahul Das, **Mohd Ashraf Rather**, N.Basavaraja, Rupam Sharma and Uday Kumar udit-2012. Effects of nonsteroidal aromatase inhibitor on sex reversal of Mozambique tilapia (*Oreochromis mossambicus*). *The Israeli Journal of Aquaculture* Vol 64 1-10 (Impact Factor: 0.9)

Nidhi Choudhary Sumedha Asthana, Rupam Sharma, **Mohd Ashraf Rather**, Pratik A.Vyas and Gopal Krishna 2012. Development of Karyotyping and Chromosome Banding of *Osteobrama belangeri* (Pengba fish). *J. of Fisheries and Aquatic Science* (ISSN 1816-4927) Vol 7: 331-338.

13. NATIONAL PUBLICATIONS

Mohd Ashraf Rather, Irfan Ahmad Bhat, Nit Sharma, Rantadeep. saha, Tanveer. Hussain and Rupam Sharma. 2015. Molecular characterization and phylogenetic analysis of metallothionein gene in *catla catla*. *Journal of Industrial Pollution Control* Vol 31(1), 51-56 (NAAS 4.1)

Mohd Ashraf Rather, Rupam Sharma, V. L. Ramya, Priyanka C. Nandanpawar, Niti Sharma and Shabir Ahmad Dar 2013. Effect of Gold nanoparticles on broodstock of *Cyprinus carpio* (Linnaeus, 1758). *Indian Veterinary Journal* Vol 90(3)141-142 (Impact Factor: 0.056)

Irfan Ahmad Bhat, **Mohd Ashraf Rather**, Rantadeep. Saha, and Rupam Sharma. 2015. Identification and Expression Analysis of Thyroid Stimulating Hormone Receptor (TSHR) in Fish Gonads Following LHRH Treatment. *Proceedings of the National Academy of Sciences, India - Section B: Biological Sciences* Vol 1 pp 1-8 (Impact Factor: 0.39)

Nandanpawar, P., Badhe, M., **Mohd Ashraf Rather** and Rupam Sharma 2013 Chitosan nanoparticles for gene delivery in *Macrobrachium rosenbergii* (DE MAN 1879) *Journal of Cell and Tissue Research* Vol. 13(2) 3619-3624 (NAAS 4.38)

Pratik Vyas, Rupam Sharma, Nidhi Choudhary, Sumedha Asthana, **Mohd Ashraf Rather** and Gopal Krishna-2013. Development of Karyotype and Banding of the Critically Endangered Olive Barb, *Puntius sarana* (Hamilton, 1822). *Indian Veterinary Journal* Vol 90(3): 12-14 (Impact Factor: 0.056)

Hemanta Pokhrel, Sangipran Baishya, Bipul Phukan, Devika Pillai and **Mohd Ashraf Rather**-2018. Occurrence and Distribution of Multiple Antibiotic Resistance Bacteria of Public Health Significance in Backwaters and Aquaculture Farm. *International Journal of Current Microbiology and Applied* 02 pp36-44

13. RESEACH PROFILE

1. Google scholar

<https://scholar.google.co.in/citations?user=DFaNz6gqY3oC&hl=en>

2. https://www.researchgate.net/profile/Ashraf_Rather

14. JOURNALS EDITORIAL BOARD MEMBER

- Editorial Board Member: Genes & Genomics. Springer publisher.
- Editorial Board member: Biosciences, Biotechnology Research Asia (BBRA)
- Editorial Board member: Journal of peer-scientist

15 .PROFESSIONAL REFERENCES

1 **Dr. J. K. Sundaray**

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2 **Dr. Rupam Sharma, Principal Scientist**

Division of Fish Genetics and Biotechnology

Central Institute of Fisheries Education, Mumbai, India

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3 **Dr .Aparana chaudhari HoD and Principal Scientist**

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CONFIRMATION:

I have read the above all information and certify that the curriculum vitae are current and accurate statement of my professional record.