**CURRICULUM VITAE (CV)**

**1. Personal profile:**

* **Name:** **Ms. Annu Kumari**
* **Gender:** Female
* **Date of birth:** 10.11.1991
* **Father`s name**: Mr. Jai Jai Jha
* **Nationality:** Indian
* **Marital status:** Married
* **Religion:** Hinduism
* **Language known:** Maithili, English, Hindi & Bhojpuri
* **Permanent Address:** C/O-Wanbhalang house

Motinagar, Block-2

East Khasi Hills, Shillong – 793014

* **Address for correspondence:** Biochemical Adaptation Lab

Department of Zoology

North-eastern Hill University

Shillong-793022

* **Contact Number: 8837287612**
* **Email address:**  **annujha5426@gmail.com**
* **Area of specialization:** Genetics & Biochemical Adaptation

**2. Academic qualifications:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Qualification**  | **Year of Passing** | **Board/****University** | **Subjects** | **Division/****Grade and remarks** | **% of marks** |
| **SSLC** | **2009** | **MBOSE**(Govt. Girls Higher Secondary SchoolShillong) | English, Alternative English, Maths, Science, Social Studies, Health Education and E.V.S | **1st****(Letter marks in Science, Health Education and Social Studies)** | **78** |
| **HSSLC** | **2011** | **MBOSE**(St. Mary’s College-Shillong) | English, Alternative English, Biology, Chemistry, Physics, Maths andE.V.S | **1st** **(Letter marks in Biology and English)** | **67.8** |
| **B. Sc** | **2014** | **NEHU**(St. Edmund’s College-Shillong) | **Zoology (major), Chemistry, Botany and E.V.S** | **1st** **(5th rank)** | **73.5** |
| **M.Sc** | **2016** | **NEHU** | **Zoology (Specialization- Genetics)** | **1st** **(5th rank)** | **72.33** |
| **Ph.d** |  | **NEHU**(Under Prof. Nirmalendu Saha) | **Zoology (Specialization- Biochemical Adaptation)** | **Currently pursuing** |

**3. Title of the thesis:**

**Molecular characterization and expression of different osmosensitive transporter genes under osmotic stress in air-breathing catfish, *Clarias magur* (Hamilton)**

**4. Research experience: 6 years**

**5. Research Publications:**

**Research Articles: 2**

**Kumari A**., Koner D., Lanong A., Khongmawloh E., Snaitang R., Saha N (2022).

Changes in the expression of certain osmosensitive channel and transporter genes in

primary hepatocytes of air-breathing catfish, *Clarias magur*: A strategy to adapt

under osmotic stress. *Aquaculture*, 562: 738756 (Elsevier Publication, **IF: 5.13**)

Koner D., Banerjee B., **Kumari A**., Lanong A., Snaitang R., Saha N. (2021).

Molecular characterization of superoxide dismutase and catalase genes, and the

induction of antioxidant genes under the zinc oxide nanoparticle-induced oxidative

stress in air-breathing magur catfish (*Clarias magur*). Fish Physiology and

Biochemistry, 47: 1909-1932. (Springer Publication, **IF: 3.01**)

**Book Chapters: 2**

**6. Number of Sequences submitted in NCBI: 17**

* **MH648619** **Kumari,A**., Banerjee,B., Koner,D. and Saha,N. *Clarias magur* Sodium/potassium-transporting ATPase subunit alpha-1 (*atp1a1*) mRNA, complete cds.
* **MH681996 Kumari,A**., Banerjee,B., Koner,D. and Saha,N. *Clarias magur* urea transporter 1 (*slc14a1*) mRNA, complete cds.
* **MH681995** **Kumari,A**., Banerjee,B., Koner,D. and Saha,N. *Clarias magur*sodium and chloride-dependent taurine transporter (*slc6a6*) mRNA, partial cds.
* **MH648618** **Kumari,A**., Banerjee,B., Koner,D. and Saha,N. *Clarias magur* sodium/potassium-transporting ATPase subunit beta-1 (*atp1b1*) mRNA, complete cds.
* **MH681998 Kumari,A**., Banerjee,B., Koner,D. and Saha,N. *Clarias magur* aquaporin 1 (*aqp1*) mRNA, complete cds.
* **MH681999** **Kumari,A**., Banerjee,B., Koner,D. and Saha,N. *Clarias magur* aquaporin 3 (*aqp3*) mRNA, complete cds.
* **MH682000** **Kumari,A**., Banerjee,B., Koner,D. and Saha,N. *Clarias magur* aquaporin 4 (*aqp4*) mRNA, complete cds.
* **MH607601** **Kumari,A**., Banerjee,B., Koner,D. and Saha,N. *Clarias magur* aquaporin 7 (*aqp7*) mRNA, complete cds
* **MH52125 Kumari,A**., Banerjee,B., Koner,D. and Saha,N. *Clarias magur* aquaporin 8 (*aqp8*) mRNA, partial cds.
* **MH492320** **Kumari,A**., Banerjee,B. and Saha,N. *Clarias magur* aquaporin 11 (*aqp11*) mRNA, complete cds.
* **MH492321 Kumari,A**., Banerjee,B. and Saha,N. *Clarias magur* aquaporin 12 (*aqp12*) mRNA, partial cds.
* **MH764353 Kumari,A**., Banerjee,B., Koner,D. and Saha,N. *Clarias magur* GABA transporter 2 (*slc6a13*) mRNA, complete cds.
* **MH648620 Kumari,A**., Banerjee,B., Koner,D. and Saha,N. *Clarias magur* sodium/potassium-transporting ATPase subunit beta-3 (*atp1b3*) mRNA, partial cds.
* **MH682001 Kumari, A**., Banerjee,B., Koner,D. and Saha,N. *Clarias magur* urea transporter 2 (*slc14a2*) mRNA, partial cds.
* **MW773840 Kumari,A**., Koner,D., Lalong,A., Khongmawloh,E., Snaitang,R., Sharma,R. and Saha,N. *Clarias magur* claudin-1 (*cldn1*) mRNA, complete cds*.*
* **MW821487 Kumari,A**., Koner,D., Lalong,A., Khongmawloh,E., Snaitang,R. and Saha,N. *Clarias magur* claudin-4 (*cldn4*) mRNA, complete cds*.*
* **MW752164** Lalong,A., **Kumari,A**., Khongmawloh,E., Snaitang,R. Koner,D. and Saha,N. *Clarias magur* catalase (cat) mRNA, complete cds*.*

**7. Conferences/ seminars/ symposiums/ webinars attended and papers presented:**

* Presented **orally** a **paper** entitled “Effects of anisotonicity on the expression of different osmosensitive transporters/ channels in primary hepatocytes of air-breathing catfish, *Clarias magur*” in the **“3rd International Symposium on Genomics in Aquaculture”** organized by the **ICAR-Central Institue of Freshwater Aquaculture in collaboration with Association of Aquaculturists. From 21th-23th January 2020 at Bhubaneswar, India.**
* Presented **orally** a **paper** entitled “The expression of different osmosensitive transporters/ channels under osmotic stress in primary hepatocytes of air-breathing catfish, *Clarias magur*” in the **National Symposium on Recent Trends in Zoological Sciences** organized by the **Department of Zoology,** **North-Eastern Hill University. From 28th-29th February 2020 at Shillong – 793022**.
* Presented a **poster** entitled “Anisotonicity induced osmoadaptational strategies to defend against osmotic stress in primary hepatocytes of air-breathing catfish, *Clarias magur*” in the **National seminars on Life & Life processes: Interdisciplinary Approach for Sustainable Development” organized by the Department of Zoology, Goa University. From: 19th- 21st July, 2021**through virtual mode.

**8. Conferences/ seminars/ symposiums/ webinars attended:**

* Participated in **National Conference** entitled "Technological Empowerment of Women" organized by **The National Academy of Sciences, India (NASI) at Vigyan Bhavan, New Delhi from March 8th – 9th, 2018.**
* Participated in **National Conference** entitled "Recent Trends in Zoological Research in North-East India" jointly organized by the **Department of Zoology, North-Eastern Hill University, Shillong – 793022 and the Zoological Society (Kolkata)** **from April 19th – 20th, 2018.**
* Participated in **National** Life Science Enterpreneurship Awareness Programme organized by **School of Life Sciences, North Eastern Hill University, Shillong on 8th March 2019.**
* Participated in **International webinar** entitled "Breakthrough in Cell Science" organized by the **Department of Zoology, Midnapore College, West Bengal, India on 9th August, 2020.**
* Participated in **National webinar** entitled "Scorpions: The Incredible Arachnids" organized by the **Department of Zoology, Assam Don Bosco University on the 8th August, 2020.**
* Participated in **National webinar** entitled "Dynamics of Chytridiomycosis, a panzootic disease causing Amphibian declines" organized by the **Department of Zoology, Assam Don Bosco University on 16th August, 2020.**
* Participated in **National webinar** entitled "Immunotherapy approaches in cancer drug" discovery organized by **Mizoram University Aizawl, India on 5th August 2020**
* Participated in **National webinar** entitled "Metagenomics for climate Resilient Agriculture" organised by **Centre for Climate change Studies, Sathyabama Institute of Science and Technology , Chennai on 15th August, 2020**
* Participated in **International Webinar** entitled "COVID-19 Pandemic- Impact on Sustainable Fishery Sector and Global Trade (CPISFSG-2020)" organised by **Department of Marine Biology, Vikrama Simhapuri University, Nellore on 17th August 2020.**
* Participated **in International webinar** entitled “Material science and importance of developing composite materials” organized by the **Department of Science and Humanities, Sreenivasa Institute of Technology and Management Studies , Chittoor, AP, India on 21st August 2020.**

**9. Training programmes attended**

* Paticipated in the **"One–day Training Workshop on Leica Confocal Laser Scanning Microscope"** jointly organized by the **School of Life Sciences, North Eastern Hill University, Shillong & Leica Microsystems,** India held on 18th April 2019.
* Participated in a three day workshop entitled **“Publishing Ethics and Research Methodology"** organized by **Dr. B.R. Ambedkar Central Library, Jawaharlal Nehru University, New Delhi** from Aug 12th - 14th, 2020 through virtual mode.

**10. Technical skills:**

Well trained on the following techniques:

* RNA isolation
* cDNA synthesis
* qPCR Real-Time
* DNA sequencing
* Primer designing
* Enzyme assay
* Various biochemical analysis
* Western blotting
* Immunocytochemical analysis with Confocal Laser Scanning Microscope
* Basic Bioinformatics
* Primary cell culture

**11. Computer knowledge**-

Well aquainted with basic computer fundamentals, including Microsoft Word, Microsoft Excel, Microsoft powerpoint and internet.

**12.** **Honours and Awards received:**

* **Certificate of Appreciation** awarded by St. Edmund's College, Shillong in recognition and appreciation for securing **First Class Fifth rank in Zoology Honours** Degree Examination, 2014 under North Eastern Hill University,Shillong.
* **“Rajendra Kumar Sunheri Devi Jain Charitable Endowment Award” (Book Grant),** for the year 2014 for securing a **high percentage of marks in B.Sc. Honours (Zoology)** among the candidates in the year 2014**.** By theNorth Eastern Hill University,Shillong.
* **Awarded** for **Third position in the M.Sc. (Zoology) Seminar** held at the Department of Zoology, North Eastern Hill University during the academic year 2015-2016.
* Certificate of rank holder achieved under North Eastern Hill University, Shillong in recognition for securing **First Class Fifth rank in M. Sc. (Zoology)**, 2016.
* Won first prize for possession of best **moral ethics** in the year 2010 by St. Mary’s College-Shillong.
* Felicitated with certificate for scoring **high percentage of marks in class 12 (Science)** among students in the year 2011 by St. Mary’s College-Shillong.
* Received prize for securing **First place in the Environment Quiz Competition** held on the occasion of World Environment Day at Govt. Girls. Higher. Secondary school, Shillong, in the year 2008 by St. Mary’s College-Shillong.
* Awarded with **Excellence certificate** during computer awareness programme in St. Mary’s college in the year 2009
* **Certificate of Appreciation** awarded by Govt. Girls. Higher Secondary school, Shillong in the year 2006 for securing highest marks in mathematics.
* **Certificate of Appreciation** awarded by Govt. Girls. Higher Secondary school, Shillong in the year 2009 for securing letter marks in Science, Social science and Health Education.

**13. Extracurricular activities:**

* Participated in quiz, debate, extempore, science exhibition, essay writing, running completion, carom, cricket, and some other program also during college festive.
* Excellent hosting skill and have hosted many functions during the academic years.
* Was selected as class representative in the NEHU University as well as during course work of PhD.

**14. Teaching experience: 0.3 years**

**15. Research area-** Biochemical Adaptation, Genetics, Fisheries and Molecular Biology

**Declaration: I do hereby declare that the above mentioned information’s made by me in the cv are correct to the best of my knowledge and belief.**

Place: Shillong

Date: 16/ 04/ 2022 (**Annu Kumari)**