**Susmita Dey, B.Ed., MSc., PhD**

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**PROFESSIONAL SUMMARY:**

**About me** - Entrepreneurial researcher with 10+ years of research & teaching experience in nutrition biochemistry as evidenced by several peer reviewed publications. Extensive experience working with animal model (zebra fish). Demonstrated ability to draft research articles, SOP’s, bio-ethic protocols, project budget and communicate research work to reviewers and funding agencies. Established administrative skills as the program coordinator and executive member of the research and academic council at Royal Global University. Successfully mentored M.Sc. research projects (59 students so far) and currently mentoring 1 PhD research scholar.

**I bring in** – A strong interest to understand the interplay of diet/nutrition and life style choices in disease pathogenesis particularly in cancer and inflammatory bowel disorder. A demonstrated ability in developing research and training materials. Strong interpersonal skills & ability to relate to team members. A keen planner & implementer with track record of executing projects in a timely manner. Enthusiastic and quick learner.

**EDUCATION AND TRAINING:**

**Education:**

2016  **PhD**

**Gauhati University,** *Guwahati, Assam, India*

2002 **B.ED**

**Gauhati University**, *Guwahati, Assam, India*

2001 **Master of Science: Zoology (Specialization in Fish and Fishery**

**Biology)**

**Gauhati University,** *Guwahati, Assam, India*

1998 **Bachelor of Science: Zoology honors**

**Handique Girls College,** *Guwahati, Assam, India*

**WORK EXPERIENCE:**

1. **Associate Professor and HoD, Department of Zoology, Royal School of Life Sciences, Royal Global University, 08/18 - current**

Successfully conducted a demographic study to develop a prediction tool for liver disease in the different Ethnic groups in Assam.

Draft research proposal, design research budget and submit to extramural funding agencies (national). Mentor research students.

Design and develop course curriculum for graduate and post-graduate programs

Design and execute career development programs for graduate and post-graduate students.

Conduct and coordinate field education/research programs.

Developed laboratory course and guidelines for B.Sc and M.Sc students.

1. **Guest faculty, Cotton College State University, 01/18 – 07/18**

Educated zoology graduate and under graduate students, coordinated research and laboratory experiments.

1. **Research Associate, Guwahati Medical College and Hospital, Bhangagarh, Guwahati, Assam, 12/17 - current**

Conduct research study to identify the relation between depression and prolactin hormone in women of various age group.

1. **Pre medical entrance trainer, Motion Ltd, Kota, Guwahati Center-ABC, Guwahati, Assam**

Trained students for pre medical entrance of AIPMT, AIIMS, and NEET.

1. **Lecturer and Executive Academician, Seven Sisters College, Silpukhuri, Guwahati, Assam-781003, 11/01 - 7/17**

Taught zoology at graduate and under graduate level. In addition, my job responsibilities included presenting progress seminars to the board of directors and attending stakeholders meetings.

1. **Doctoral research, 06/09 - 06/15**

Conducted research on “The carotenoid pigmentation and its metabolism in freshwater fish”.

1. **Research Scholar, Gauhati University, Jalukbari, Assam, 3/05 - 6/08**

Primary research focus was to study the carotenoid molecules in ornamental fish.

1. **Research Scholar, Gauhati University, Jalukbari, Assam, 2/02 - 10/04**

Was involved with the project to study natural and anthropogenic hazards in fish and fisheries of NE India.

1. **Research Scholar, Gauhati University, Jalukbari, Assam, 9/00 to 9/01**

Was involved with the project to study the distribution of zooplankton and physico-chemical character of water in four lentic waterbodies of Jalukbari, Assam.

**APPLIED TECHNICAL (RESEARCH) SKILLS:**

A. **Protein biochemistry:** Protein sequencing (apoprotein from organisms) by the UniProt database. Sequence analysis using the GPCR – Sequence – Structure – Feature – Extractor (SSFE) database.

B. **Tools and techniques in molecular biology**: Fundamental knowledge of techniques in transcriptional (PCR) and translational (Western blot, Immuno-histochemistry, flow cytometry) biology.

C. **Molecular Modeling:** Identification of novel motifs in retinol binding proteins. Homology modeling of apoprotein opsin and covalent docking of 11-cis retinal and 11-cis 3, 4-didehyroretinal to obtain structures of rhodopsin and porphyropsin.

D. **Vitamin metabolism:** Studies on carotenoids pigments and its metabolism using visual spectrophotometry, HPLC analysis.

E. **Hormonal assay:** Hormonal assay of prolactin hormone in relation to depression.

F. **Restoration of pigmentation in ornamental fishes:** Restoration of pigments in aquarium rearing condition by feeding them with biological matters.

G. **Limnology:** Extensive studies on different lentic waterbodies and wetlands, their physio chemical properties and biodiversity.

H. **Ecology:** Studies on fish diversity in N.E. India.

I. **Statistical analysis:** Statistical data analysis using SAS and other standard software applied in bio-statistics (student’s T test, Q-test etc.)

J. **Computer skills:** All components of MS Office.

**CONTRIBUTIONS TO BIOMEDICAL RESEARCH:**

**Published Articles/Reviews:-**

1. **Susmita Dey**, Raihana Jasmine, Arijit Chakraborty: Novel insight into the cellular and molecular signalling pathways of Hibiscus sabdariffa L. on cancer prevention. (Communicated to Chemical Biology Letters, September 2021)

2. **Susmita Dey**, Arijit Chakraborty , Gitartha Kaushik, Saurav Mahanta : Homology modeling of apoprotein opsin and covalent docking of 11-cis retinal and 11-cis 3, 4-didehyroretinal to obtain structures of rhodopsin and porphyropsin from Zebra danio, Danio rerio (Hamilton, 1822). Jordan Journal of Biological Sciences Vol.14 Issue 4, 2021.

3. U.C. Goswami, **Susmita Dey**: Vitamin A Content, Nutritional Value and Seasonal Variation of Proximate Composition of Indian Major Carps in IOSR Journals, published in IOSR Journal of Dental and Biological Sciences Vol. 15, Issue 2, February. 2016. www.iosrjournals.org.

4. U.C. Goswami, **Susmita Dey**: Restoration of pigmentation in Trichogaster fasciata, published in IOSR Journal of Pharmacy and Biological Sciences Vol. 11, Issue 2, March-April. 2016. www.iosrjournals.org.

5. U.C. Goswami, **Susmita Dey**: Studies on brightness as an indicator of fresh condition in freshwater fish. Proc.Zool.Soc.India. 13 (2): 1-10: (2014) ISSN 0972-6683.

6. Umesh C. Goswami, **Susmita Dey**, Jahnabi Goswami and Namita Sharma: Terminal Oxidation of β- carotene in freshwater carp, Cirrhinus mrigala: Conversion of β- carotene into vitamin A in freshwater fish. (In Communication).

7. **Susmita Dey**, Gitartha Kaushik and Saurav Mahanta: Identification of novel motifs in retino binding proteins. (In Communication).

8. U.C.Goswami and **Susmita Dey**: Food preference and carotenoid pigmentation in Channa barca. (In Communication).

9. U.C.Goswami and **Susmita Dey**: Food preference and carotenoid pigmentation in Puntius denisoni. (In Communication).

**Book Chapters:**

1. **Dey S**, D Das, Chakraborty A. Migration. Encyclopaedia of Animal Cognition and Behaviour,Springer Nature Switzerland ,PP 121-28.

2. Borthakur T, **Dey S**, Chakraborty A. Insect Locomotion. Encyclopaedia of Animal Cognition and Behaviour,Springer Nature Switzerland ,PP 49-54

3. **Dey S**,Das D ,Chakraborty A, Roychoudhury S . Plant based traditional contraceptive use in India:Safety and regulatory issues. In: Evidence based validation of traditional medicines:A comprehensive approach. Springer Nature Switzerland.

**Published abstracts from conferences:**

* **Susmita Dey** and Binoy Kumar Deka (2018). Natural and Anthropogenic

Hazards: Threats to Fish and Fisheries of North East India.

* **Susmita Dey** and Binoy Kumar Deka (2018). North East India: The global

hotspot for fish fauna.

* **Susmita Dey** and U.C. Goswami (2018). Carotenoid pigment molecules in

Ornamental fish.

* **Susmita Dey** and Sasanka Shekar Ghosh (2018): Studies on zooplankton

in four lentic waterbodies of Jalukbari.

**Workshops, Conference and Symposium:**

* Attended DST (Govt. of India) Sponsored Workshop on Wildlife Research Initiatives in North East India
* Attended Workshop on “Current Trends in Bioinformatics Teaching and Research”, 2009.
* Attended National Symposium on “Arts meet Science: Surrealistic thoughts in infectious diseases.” Chief presenter was Dr. Shyamal Roy an Internationally Reputed Biologist on 25th June 2016.
* Attended National Symposium on “Your Genes Speaks About Your Health”,

chief presenter was Dr. J K Roy of BHU on 25th January 2018.

• Participated and presented paper in the National Seminar on Integrated

Approach in Zoological Research and Biennial Conference of Zoological

Society of Assam on 30th & 31st March 2017

* Participated and presented poster in the 4th International Conference of Environment and Ecology by IFEC and Confederation of Indian Universities, New Delhi from 12th to 14th February 2018.
* Participated and presented poster 1ST North East Aqua Professional Meet cum Workshop on Recent Developments in Aquaculture by ICAR-CIFA, Govt. of India, Bhubaneswar from 5th & 6th March 2018.
* Participated and presented paper in the National Conference on Recent Trends in Zoological Research in N.E. India by ZSI and NEHU, from 19th to 21st April 2018.

**TEACHING/DIDACTIC:**

1. Currently, as an Assistant Professor and coordinator, Department of

Zoology, Royal School of Life Sciences, Royal Global University.

1. Worked as an Assistant Professor (Contract) in 2017 in Cotton University. Supervised students on their project work.
2. Worked as a lecturer and an executive academician in Zoology department since 2001-2016 in Seven Sisters College.
3. Trained students for pre-medical entrance in a leading institute of Kota, Guwahati center.
4. Tutored Poly technic students in Organic and Inorganic Chemistry.
5. Trained Undergraduate students in conducting laboratory research. Organized workshop to encourage high school students to pursue science projects works.
6. Biology instructor at a private coaching center (Career Point) in Guwahati (taught +12 biology course) (2001-2002).

**OTHER INFORMATION:**

* Professional proficiency in English, Hindi, Bengali and Assamese.
* Supervised in creating a thesis report ‘Sacred node- An Inter-Faith Spiritual Awakening Centre for Sri Aurobindo Society’ of a student pursuing Bachelor of Architecture course.
* Attended several social workshops including Mitrata ‘Youth Leadership Training Camp’, Help Age India Social Service.
* Recipient of All India Camel Color Contest at city level.
* Completed a certificate course in Computer Application with an ‘A’ Grade.
* Other skills includes literary skills in composing poems and fictions in English and Bengali, Recitation, Painting and Singing.

**RESEARCH SUPPORT:**

1. Project title – “Novel insights in identification and characterization of iodine as potential spermicidal agent in patient who undergo consultations for infertility: Future perspectives to be explored as non-hormonal male contraceptive”; Role – Co-PI; Amount – 40,000,000 (INR); Funding agency – Sree Ramakrishna Paramahansa Research Grant 2020, Sree Padmavathy Venkateswara Foundation, India.
2. Project Title –“Biotehnological interventions in formulation and development of high quality fish feed from available Bioresources of Assam”, Role – Co PI; Amount – 10000000 (1NR);Funding agency – DBT ,India.