

**Dr. Rahul Sarma, M.Sc, PhD**

Designation: Assistant Professor

Department: Zoology

Institution: Biswanath College



**Contact Information:**

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**Academic Qualifications:**

**Ph.D., Zoology, University of Gauhati, 2017**

Thesis: *Antioxidant and hypolipidemic properties of bioactive fractions of Garcinia pedunculata Roxb. in stress induced rat model*

**M.Sc., Zoology, University at Gauhati, 2011**

Grade/Class: First

**B.Sc., Zoology, Arya Vidyapeeth College, Guwahati, 2009**

Grade/Class: First, Under Gauhati University

**Research Interests:**

Traditional Knowledge-Based Drug Discovery and Development

**Teaching Experience:**

**Assistant Professor (Non-sanctioned post), D.K College, Kamrup (R), 2017-18**

Courses: M.SC/B.Sc. in Zoology

**Assistant Professor (Non-sanctioned post), S.B Deorah College, Guwahati, 2018-19**

Courses: B.Sc. in Zoology

**Research Experience:**

**Junior Research Fellow** (JRF, Institute of Advanced Study in Science and Technology, DST, Government of India, 2013-2015).

**Senior Research Fellow** (SRF, Institute of Advanced Study in Science and Technology, DST, Government of India, 2016).

**Publications:**

**Sarma, R.,** (2016). "Polyphenol Rich Extract of *Garcinia pedunculata* Fruit Attenuates the Hyperlipidemia Induced by High Fat Diet." *Journal of Frontiers in Pharmacology*, vol. 7.

**Sarma, R.,** (2016). "Evaluation of Antioxidant and Antifungal Activities of Polyphenol Rich Extracts of Dried pulp of *Garcinia pedunculata* Roxb. and *Garcinia morella* Gaertn. (Clusiaceae)." *Tropical Journal of Pharmaceutical Research*, vol.15.

**Sarma, R.,** (2015). "Ethnopharmacological Survey of *Garcinia pedunculata* Roxb. Fruit in Six Different Districts of Assam, India." *International Journal of Pharmaceutical Science Invention*, vol.4.

**Sarma, R.**, (2018). “Anticoagulant mechanism, pharmacological activity, and assessment of preclinical safety of a novel fibrin(ogen)olytic serine protease from leaves of *Leucas indica*.” *Scientific Reports, Nature*, vol.8.

**Sarma, R.**, (2016). “Antidiabetic and Antilipidemic Effect of *Musa balbisiana* Root Extract: A potent Agent for Glucose Homeostasis in Streptozotocin-Induced Diabetic Rat.” *Journal of Frontiers in Pharmacology*, vol.7.

**Sarma, R.** (2015). “Diversity and Conservation Threats of Birds Fauna in Deepor Beel.” *Journal of Tropical Zoology*, vol.5.

**Sarma, R.**, (2016). “Antioxidant Effect of Sericin in Brain and Peripheral Tissues of Oxidative Stress Induced Hypercholesterolemic Rats.” *Journal of Frontiers in Pharmacology*, vol.7.

**Sarma, R.**, (2023). “Unraveling the biochemical strength of gut bacteria in *Monopterusuchia*.” *Journal of Advanced Zoology*, vol.44.

### **Conferences and Workshops:**

**Sarma, R.** (2024). “A study of Phytochemical, Antioxidant & Ethnopharmacological survey of *Garcinia* fruit.” Paper presented at **International Conference** on Traditional Knowledge (Exploring Traditional Knowledge: Bridging Past and Future), Organised by Nowgong College (Autonomous).

**Sarma, R.** (2023). “Phytochemical, Antioxidant and Conservation status of *Garcinia* fruit”. Paper presented at **International Conference** on Biodiversity: Exploration, Exploitation and Conservation for Sustainable Development (ICB-2023), Organised by Department of Botany, PDUAM, Behali, Assam.

**Sarma, R.** (2023). “Ethnopharmacological survey, Phytochemical & Antioxidant properties of *Garcinia pedunculata* fruit”. Paper presented at **International Conference** on Challenges and prospects of Bioresource Conservation in Eastern Himalaya-with special reference to UN-Sustainable Development Goals, Organised by Department of Zoology, Gauhati University.

**Sarma, R.** (2022). “Ethnopharmacological survey of *Garcinia pedunculata* fruit in different districts of Assam.” Paper presented at **National Seminar** Recent Advances in Biological Sciences: Biodiversity & Human Welfare, Organised by Department of Zoology, Darrang College in collaboration with Zoological Society of Assam.

**Sarma, R.** (2019). “Traditional Knowledge Based Drug Development and Delivery.” Paper presented at the International Workshop on Development of Novel Antibiotics to tackle Antimicrobial Resistance, **Dhaka University, Bangladesh**.

**Sarma, R.** (2018). “*Garcinia pedunculata* and its medicinal value.” Paper presented at National Seminar Biodiversity and Wildlife Conservation Biology, **Digboi College, Digboi**.

**Sarma, R.** (2016). “A chemical investigation and antioxidant status of dried pulp of *Garcinia pedunculata* fruit.” Paper presented at the Annual Technical Session of Assam Science Society, **Goalpara College, Goalpara**.

**Sarma, R.** (2015). “Antioxidant, phytochemical and conservation status of *Garcinia* species.” Paper presented at the National seminar on Sustainable Conservation Strategies for Bio-Resources of NE India, **Arya vidyapeeth College, Guwahati.**

**Sarma, R.** (2014). “Comparative study of the In vitro antioxidant properties in the aqueous and hydro alcoholic extracts of North-eastern Traditional Piper betel leaf.” Paper presented at the International Conference Multidisciplinary Healthcare, **AIIMS, New Delhi.**

**Sarma, R.** (2014). “Screening of antioxidant and phytochemical properties of *Garcinia pedunculata*.” Paper presented at the International Conference on Disease Biology and Therapeutics, **IASST, DST, Guwahati.**

**Sarma, R.** (2014). “Antioxidant and phytochemical screening of different extracts of dried pulp of *Garcinia pedunculata* and *Garcinia morella*.” Paper presented at the International Congress of Environmental Research, **R.V. College of Engineering, Bangalore.**

**Sarma, R.** (2013). “In vitro antioxidant properties of NE region of piper betel leaves.” Paper presented at the National Conference on plant resource of NE region and their bioprospecting, **Gauhati University, Guwahati.**

**Sarma, R.** (2012). “Contribution of Charan Beel in socioeconomic development of Morigaon district, Assam and its contribution: A study.” Paper presented at the National Conference on Hydrology and Water Quality Management, **Morigaon College, Morigaon.**

#### **TRAINING WORKSHOP AND SYMPOSIA**

**Sarma, R.** (2006). Workshop on Taxidermy Through Taxonomy. Organized by Department of Zoology, **Arya vidyapeeth College in association with Zoological Society of Assam, Guwahati, India, 27-28<sup>th</sup> December.**

**Sarma, R.** (2009). UGC Sponsored National Seminar on Biodiversity Spectrum of North- East India. Organized by Department of Zoology, **Arya vidyapeeth College in association with Zoological Society of Assam, Guwahati, India, 18-19<sup>th</sup> September.**

**Sarma, R.** (2010). 55<sup>th</sup> Annual Technical Session. Organized by **Gauhati University, Guwahati, India, 15<sup>th</sup> February.**

**Sarma, R.** (2011). Training Programme on Introduction to Molecular Genetics and Bioinformatics. Organized by **NRC on pig (ICAR), Guwahati, India, 7-8<sup>th</sup> September.**

**Sarma, R.** (2011). Short term course on Cancer Biology: Basics Theoretical Aspects. Organized by **Indian Institute of Technology, Guwahati, India, 26-27<sup>th</sup> August.**

**Sarma, R.** (2012). National Training on Embryonic and Spermatogonial Stem Cell Biology. Organized by Embryo Biotechnology Lab, Animal Biotechnology Centre, **National Dairy Research Institute, ICAR, Karnal, Haryana, India, From 3-23 February.**

**Sarma, R.** (2012). 57<sup>th</sup> Annual Technical Session. Organized by **Gauhati University, Guwahati, India, 16<sup>th</sup> March.**

**Sarma, R.** (2012). Workshop on Advanced Techniques on Molecular Biology. Organized by **Institutional Biotech Hub, Cotton State University, Guwahati, India, 27-30<sup>th</sup> March.**

**Sarma, R.** (2012). Workshop on ELISA Techniques. Organized by **Institutional Biotech Hub, Handique Girls' College, Guwahati, India, 6<sup>th</sup> July.**

**Sarma, R.** (2013). Conference cum live surgical workshop. Organized by **North East Cancer Hospital and Research Institute, Guwahati, India, 1<sup>st</sup> December.**

**Sarma, R.** (2013). Workshop on Recent Trends in Biological Electron Microscopy. Organized by **North Eastern Hill University, Shillong, India, 5-8<sup>th</sup> March.**

**Sarma, R.** (2013). Participated in the Indian Science Congress. Organized by **Calcutta University, Kolkata, India, 3-7<sup>th</sup> January.**

**Sarma, R.** (2013). Training on Techniques in metagenomics. Organized by **Institutional Biotech Hub and Bioinformatics Centre, IASST, DST, Government of India, Guwahati, India, 26-28<sup>th</sup> November.**

**Sarma, R.** (2013). Short term Training program on Analytical Instruments and its Application (Mass Spectrometry-GCMS and LCMS and Spectrophotometry-FTIR, UV-Vis and Fluorescence. Organized by **Guwahati Biotech Park Incubation Centre, Guwahati, India, 22-24<sup>th</sup> July.**

**Sarma, R.** (2014). Participated in the workshop on Next Generation Sequencing Techniques of DNA. Organized by **Institutional Biotech Hub and Bioinformatics Centre, IASST, DST, Government of India, Guwahati, India, 20-22<sup>nd</sup> October.**

**Sarma, R.** (2014). National Seminar on Cell Phone/ Tower Radiation Hazards and Solutions. Organized by **IASST, DST, Government of India, Guwahati, India, 18<sup>th</sup> February.**

**Sarma, R.** (2015). DBT funded Symposia on Research Methodology and Biomaterials. Organized by **NEIGRIHMS, Shillong, India, 20-21<sup>st</sup> March.**

**Sarma, R.** (2015). Symposium on Pharmacovigilance of Natural Products-A Preliminary Approach. Organized by **Department of Pharmacology, Gauhati Medical College and Hospital, Guwahati, India, 26<sup>th</sup> September.**

**Sarma, R.** (2016). Training course in Current Regulations, Handling, Breeding, Maintenance and Techniques in Laboratory Animal Experimentation. Organized by **National Centre for Laboratory Animal Sciences, National Institute of Nutrition, Hyderabad, India, 29<sup>th</sup> February.**

**Sarma, R.** (2016). One day workshop on Writing Skill. Organized by **Gauhati University Wing for International Relations and GU Alumni Association in collaboration with GU Institute of Science and Technology, Guwahati**, India, 12<sup>th</sup> August.

**Sarma, R.** (2017). State level workshop on quality improvement in newly provincialized degree colleges of Assam to face NAAC. Organized by **Samaguri College, Assam**, India, 2<sup>nd</sup> May.

**Sarma, R.** (2020). Online workshop on Flow Cytometry Techniques and Applications, organized by NECBH, **IIT G**, on 21 & 22 December.

**Sarma, R.** (2021). Short term Training (STTP) in Bioinformatics conducted by **NIELIT Guwahati** from 4<sup>th</sup> -11<sup>th</sup> January.

**Sarma, R.** (2021). Hands on training on Bioinformatics Tools and Techniques, organized by Bioinformatics center, Department of Zoology, **Gauhati University** from 25<sup>th</sup> -30<sup>th</sup> October, 2021.

**Sarma, R.** (2022). State-level Inception and Consultation Workshop in Assam Himalayan Knowledge Network, bridging science, policy & practice, organized by **Assam University, Silchar, Assam**, on 26 & 27 April.

**Sarma, R.** (2023). National Workshop on Metagenomics Principle and Workflow: From Sampling to Data Analysis, organized by Department of Zoology, **Gauhati University** from 1<sup>st</sup> -4<sup>th</sup> September.

### **Book Chapter**

1. Environmental issues and policies in India, Volume-1, September, 2020.
2. Sericulture with special reference to Assam (Based on the “Skill Enhancement Course” curriculum in the new CBCS UG & PG syllabus of Cotton University), Volume-1, 2022.

### **Awards and Recognitions:**

InSc Research Excellence Award by Institute of Scholars (InSc), Bangalore 2021.

### **Professional Memberships:**

1. Society for Ethnopharmacology (SFE-INDIA). (SFE/14/1-440).
2. Zoological Society of Assam (ZSA), (Life & Executive Member).
3. Assam Science Society [ASS], (Life member). (Membership No: 6462).

### **Additional Roles & Responsibilities:**

1. NSS Programme officer (From 5<sup>th</sup> September 2023 to till date)