

◆ MODERN EDUCATION SOCIETY'S ◆
NOWROSJEE WADIA COLLEGE, PUNE
FACULTY ACADEMIC PROFILE



DR. SANGEETA KUMARI SINHA

Assistant Professor, Zoology

Highest Qualification: M.Sc., B.Ed., Ph.D., PDF

Specialization: Zoology, Molecular and Redox Biology

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PROFESSIONAL SNAPSHOT

I, Dr. Sangeeta Kumari Sinha is a working as Assistant Professor in Zoology from past 11 years. I am researcher with extensive experience in higher education, student mentoring and Life Sciences research, with expertise spanning cell biology, stem cell research, oxidative stress, toxicology, and environmental biology. I hold a Ph.D. and M.Sc. in Zoology (University of Pune). My teaching blends research-based learning, mentorship, and EdTech-driven pedagogy, supported by training in AI for Education, Data Science, and SPSS. My research portfolio comprises 19 publications, three patents, and two book chapters, recognized through a Young Researcher Award (2025) and multiple Best Oral Presentation Awards, reflecting sustained contributions to Zoology education and research. I mentored 40+ UG/PG research projects in Oxidative Stress, Free-Radical Biology, and In-silico Studies.

EDUCATION

Qualification	University / Institution	Year
B.Sc. Zoology	Savitribai Phule Pune University, Pune	2001
M.Sc. Zoology	Savitribai Phule Pune University, Pune	2003
B.Ed.	Savitribai Phule Pune University, Pune	2004
Ph.D. Zoology	Savitribai Phule Pune University, Pune	2013
PDF Stem Cell Biology	National Centre For Cell Sciences, Pune	2014

TEACHING & ACADEMIC INTERESTS

Subjects / Courses:

- Molecular Biology • Cell Biology • Biochemistry • Biostatistics • Animal Physiology • Genetics • Research Methodology
- Techniques in Biology

Areas of Interest:

- Oxidative Stress • Free-Radical Biology • Stem Cell Biology • *In-silico* Studies

RESEARCH & PUBLICATIONS

Research Area:

- Redox Biology • Integrative Bioinformatics • QSAR modelling • AI and machine learning • Pharmacology and systems biology • Ecotoxicology

Patents:

- An Edible Composition. WIPO patent W02012055820 (A1)- 03/05/2012.
- Instrument used for detection of Diabetic Neuropathy. IPR Indian, Design No. 473111-001, 10/09/25.
- Rodent Feeding Behaviour. IPR India, Design No. 487026-001, 12/01/26.

Publications:

- To Examine the oxidative and toxic effect of *Oleo rheumea* (ayurvedic herbal oil) on *Periplaneta americana* (American cockroach). International Journal of Entomology Research, 2024.
- Small Heat Shock Protein and *Drosophila melanogaster* Development," Advances in Zoology and Botany, 2023.

- Insights into The Carcinogenic Effect of Key Skin Care Ingredients Leading To Breast Cancer: An *In-Silico* Study. Bioinformatics and Biomedical Research Journal, 2023.
- *In silico* study of phytochemicals for anticholinesterase activity as a potential drug target against Alzheimer's disease. Chem. Biol. Lett., 2022.
- *In silico* prediction of B-cell and T-cell epitope of Ves g 5 and Vesp m 5 allergens. Indian J Allergy Asthma Immunology, 2021.

Book Chapters:

- AI-Enhanced Medical Tourism for Achieving Sustainable Development Goal 3: Advancing Affordable , Accessible , and Quality Healthcare in Book name Addressing Global Health Goals with AI – Enhanced Medical Tourism, IGI Global Scientific Publishing, USA on June 2026.
- Stem Cell Therapy: Recent Advances and Future Strategies” at an International Conference on ‘Advances in Science & Technology' organized AKI' Poona College of Arts, Science & Commerce, Camp, Pune (Maharashtra) INDIA on May 2023.

ACHIEVEMENTS & PROFESSIONAL DEVELOPMENT

Awards & Recognitions

- Young Researcher Award (2025) — International Conference, Visva-Bharati University
- Best Oral Presentation Award (2025, 2023) — Visva-Bharati University; IIM Ghaziabad
- Post-Doctoral Fellowship, DBT, India (2013–2014)
- Senior Research Fellowship, CSIR-SRF (2010–2012)
- Junior Research Fellowship, UGC-CAS, University of Pune (2007–2010)
- Research Assistant Fellowship, Unilever Pvt. Ltd., Bangalore (2005–2007)
- Multiple university-level academic prizes and Gold medals during B.Sc. and B.Ed. studies (2000–2004)

Selected Talks/Certification / FDP / Workshop

- Invited talks on stem cells, vermicomposting & mushroom cultivation, environmental issues, and COVID-19's environmental impact (2018–2023)
- MS-DEED FDP on "Innovative Pedagogies for College Teachers," IISER Pune (2024)
- Certified Data Science (IBM, 2025) and AI for Education — Advanced (Kennesaw State University, 2025)
- GIAN courses on genome integrity & DNA repair, epigenetic gene regulation, and neuroendocrine integration, SPPU (2016–2018)
- Coursera certifications: Epidemiology, Ecology, Animal Behavior & Welfare (UNC Chapel Hill); How to Write and Publish a Scientific Paper (École Polytechnique)

Professional Affiliations

- Lifetime Editorial Member, Edwin Group of Journals
- Lifetime Member, Indian Society of Cell Biology
- Lifetime Member, Zoological Society of India, Gaya
- Reviewer: Scientific reports, African Journal of Pharmacy and Pharmacology, Contemporary Research and Perspectives in Biological Science,

ACADEMIC RESPONSIBILITIES

- Curriculum development and integration of technology-based, innovative pedagogical tools in classroom instruction.
- Student mentorship and academic guidance across UG/PG programmes.
- Guided more than 40 postgraduate and undergraduate student research projects.
- Conducted Field visits, Educational Tours, Workshops, Seminars for Ug and PG students.
- External Senior Supervisor and Examiner for SPPU University examinations.