

DR. SACHIN S. KULKARNI

Ph.D., M.Phil., M.Sc. (Biotechnology), DBM

Head, Department of Biotechnology | NAAC Coordinator | AICTE Nodal Officer | PM USHA Coordinator

Rajarshi Shahu Mahavidyalaya, Latur (Autonomous) · NAAC-Accredited A⁺ · Affiliated to S.R.T.M. University, Nanded

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24

YEARS IN ACADEMIA

14

PEER-REVIEWED PUBLICATIONS

23+

GOOGLE SCHOLAR CITATIONS

3

INSTITUTIONAL LEADERSHIP ROLES

PROFILE

Seasoned biotechnology academician and academic administrator with over 24 years of experience spanning teaching, research supervision, and institutional leadership. As Head, Department of Biotechnology at Rajarshi Shahu Mahavidyalaya, Latur (Empowered Autonomous Institution) — a NAAC-accredited A⁺ institution affiliated to Swami Ramanand Teerth Marathwada University, Nanded, and vested with academic autonomy since 2013 — provides strategic and academic direction for the Department: curriculum design, faculty development, and research culture. Concurrently serves as NAAC Coordinator, PM-USHA Coordinator and AICTE Nodal Officer, steering the institution's quality-assurance and regulatory-compliance functions. Combines a sustained, peer-reviewed research record — cited over 23 times on Google Scholar — in molecular biology, enzymology, and applied fermentation science with an established track record of UGC-funded research and long-standing industry-academia partnerships, bringing both scholarly credibility and practical, translational insight to academic leadership.

ACADEMIC & ADMINISTRATIVE RESPONSIBILITIES

Head, Department of Biotechnology — *Current*

- Set academic and administrative direction for the Department, holding overall responsibility for curriculum leadership (UG & PG), faculty development, laboratory infrastructure, and long-term departmental planning.
- Build and sustain a strong departmental research culture — mentoring faculty toward funded-project and publication output, and guiding student research from concept to completion.
- Represent the Department on institutional academic bodies and forums, aligning departmental strategy with the College's broader academic and quality objectives.

NAAC Coordinator — *Current*

- Lead institution-wide preparation for NAAC accreditation cycles — directing documentation, evidence compilation, and criterion-wise data consolidation across all departments.
- Chair cross-departmental coordination for Self-Study Report preparation, quality-indicator tracking, and best-practice documentation, and manage engagement with NAAC peer teams during institutional visits.

AICTE Nodal Officer — *Current*

- Serve as the institution's designated point of contact with AICTE, holding responsibility for approval processes, compliance reporting, and portal-based statutory documentation.
- Ensure the institution's continued regulatory standing through timely, accurate submission of data and adherence to AICTE norms and directives.

TEACHING EXPERIENCE

24 years of undergraduate and postgraduate teaching in Biotechnology — course design, laboratory instruction, and student research supervision at Rajarshi Shahu Mahavidyalaya, Latur (Empowered Autonomous Institution).

RESEARCH INTERESTS

Molecular biology & bioinformatics • Enzymology & protein biochemistry • Fermentation & bioprocess technology • Biofertilizer & microbial consortium development • Environmental & waste-management biotechnology

SPONSORED PROJECTS & GOVERNMENT ASSIGNMENTS

- **Co-Investigator, UGC-Sponsored Project** — “Molecular Characterization of Collagenase Family Matrix Metalloproteases and Investigation on their Inhibitor for Cancer Therapy,” funded by the University Grants Commission, New Delhi.
- **Process Optimisation Consultant** — Haemorrhagic Septicaemia (HS) vaccine production on a 300-litre fermentor, Punjab Vaccines Institute, Ludhiana, Government of India (Aug–Sep 2009).
- **Training Coordinator** — Maharashtra Agriculture Competitiveness Programme (MACP), Osmanabad District, MS, India.

EDUCATIONAL QUALIFICATIONS

Ph.D. (Zoology)	Swami Ramanand Teerth Marathwada University (SRTMU), Nanded, Maharashtra, India.
M.Phil. (Biotechnology)	Periyar University, Salem, Tamil Nadu, India.
Diploma in Business Management	ICFAI University, India.
M.Sc. Biotechnology	School of Life Sciences, SRTM University, Nanded (2000–2002) — 3rd Rank in Merit , 69.55% (First Class).
B.Sc. Microbiology, Botany & Chemistry	Dayanand Science College, Latur, SRTM University, Nanded (1997–2000) — 65.66% (First Class).

RESEARCH PUBLICATIONS — PEER-REVIEWED JOURNALS

Complete list with citation metrics available on [Google Scholar](#) (23+ citations recorded).

1. Kulkarni, S., Pathan, I., Dhotre, M., Nalle, D. A. “Phytochemical Characterisation and Biological Activities of *Pterocarpus santalinus* L. Heartwood Extracts: Pharmacological and Cosmeceutical Perspectives.” *Asian Journal of Biotechnology and Bioresource Technology*, Vol. 12, Issue 3, pp. 198–211.
2. Kulkarni, S. S., Patil, S. D., Chavan, D. G. “Extraction, Purification and Characterization of Hyaluronic Acid from Rooster Comb.” *Journal of Applied and Natural Science*, Vol. 10, Issue 1 (2018), pp. 313–315.
3. Kulkarni, S., Chavan, D. “Nutritional and Therapeutic Evaluation of *Spirulina platensis*.” *Asian Journal of Pharmaceutical and Clinical Research*, Vol. 13, Issue 7, pp. 86–90.
4. Kulkarni, S. S., Gudmalwar, R. M., Chavan, D. G. “Removal of RNA Contamination from Isolated Bacterial Plasmid DNA by Antichaotropic Salts.” *International Journal for Research in Applied Science & Engineering Technology (IJRASET)*, Vol. 5, Issue 11, pp. 748–752.
5. Kulkarni, S. S., Hingne, V. C., Dhere, D. D., Shembekar, V. S. “Homology Modelling of Human Catechol O-Methyl Transferase.” *International Journal of Biotechnology and Bioengineering Research*, Vol. 1, No. 2 (2011), pp. 179–183.
6. Kulkarni, S. S., Hingne, V. C., Dhere, D. D., Shembekar, V. S. “Analysis of Antigenic Behavior of Bt (*Bacillus thuringiensis*)-based CRY Proteins upon Parenteral Administration or Adsorption using JambW.” *Journal of Computer Intelligence in Bioinformatics*, Vol. 3, No. 2 (2010), pp. 221–227.
7. Kulkarni, S. S., Hingne, V. C., Shembekar, V. S. “Hybridization-based Approach for Detection of Mutated Alleles of SCA2 and SCA3 Subtypes in Spinocerebellar Ataxia.” *International Journal of Biotechnology and Biochemistry*, Vol. 6, No. 2 (2010), pp. 279–283.
8. Shembekar, V. S., Hingne, V. C., Kulkarni, S. S., Dhere, D. D. “Identification of Mutated Alleles of SCA12 and its Variants by Hybridization Approach.” *International Journal of Modern Biotechnology*, Vol. 1(1) (2010), pp. 127–130.

9. Kulkarni, S. S., Kamble, R. K., Patil, S. S., Shembekar, V. S. "Development of Isoniazid-based New Classes of Antitubercular Drugs using QSAR-based Approach." BIONANO FRONTIER, Vol. 3, Issue 1 (2008), pp. 10–13.
10. Shembekar, V. S., Dhotre, M. A., Shaikh, R. S., Kulkarni, S. S. "Isolation, Purification and Characterization of Silk Protein Sericin from Cocoon, Bombyx mori." BIONANO FRONTIER, Vol. 2, Issue 2 (2009), pp. 125–127.
11. Thombre, D. K., Kulkarni, S. S., Shembekar, V. S. "Production and Purification of Siderophores from Pseudomonas spp. and Optimization of Conditions for Siderophore Production." Journal of Aquatic Biology, Vol. 24(1) (2009), pp. 181–184.
12. Kulkarni, S. S., Mamile, M. A., Shembekar, V. S. "Comparative Analysis of Heavy Metal Sorption by Microorganisms." Journal of Microbial World, Vol. 11(2) (2009), pp. 255–258.
13. Kulkarni, S. S., Kakade, A. B., Rathod, S. S., Shembekar, V. S. "A Bioinformatics-based Novel Approach for Diagnosis and Treatment of Human Herpes Virus Infection." BIONANO FRONTIER, Vol. 2, Issue 1 (2009), pp. 105–107.
14. Gudmalwar, R. M., Kulkarni, S. S., Shembekar, V. S., Khobragade, C. N. "Extraction, Purification and Characterization of Thermo-stable Alpha Amylase." Journal of Cell and Tissue Research, Vol. 8(3) (2008), pp. 1511–1514.

PUBLICATIONS IN CONFERENCE PROCEEDINGS

1. Solanki, P. S., Khakke, P. V., Hingane, V. C., Dhotre, M. A., Kulkarni, S. S., Shembekar, V. S. "Study on Physicochemical and Biological Parameters of Sanjivani Lake Water located near Wadwal Bet of Latur District – A Case Study." Proceedings of the 97th Indian Science Congress, Thiruvananthapuram, Kerala, India.
2. Dhotre, M. A., Lokhande, M. V., Hingane, V. C., Kulkarni, S. S., Shembekar, V. S. "Studies on Physico-Chemical Characteristics of Ground Water of Latur City (Maharashtra State)." Proceedings of the National Conference on Climate Change and Challenges in Biodiversity Conservation, Modern College, Pune, MS, India.

INDUSTRY & COMMUNITY OUTREACH

Sustains applied, translational linkages that feed directly into teaching and student research, spanning fermentation technology, biofertilizer development, and solid-waste bioremediation:

- **Technical Consultant, Solid Waste Management** — Patpert Biotech (Pune); Janadhar Sevabhavi Sanstha (Latur); Clean Garbage Management (Pune); Kalapandhari Magaswargiya & Adiwasi Gramin Vikas Sanstha (Latur) — applying microbial and composting science to waste valorisation and biofertilizer production.
- **Natural Bio-Products, Ludhiana, Punjab** — Biofertilizer production consultancy.
- **Completed Engagements** — Composting-consortium production (Janadhar Sevabhavi Sanstha, Latur) and biofertilizer production (Manjra Krishi Vigyan Kendra, Latur).

LABORATORY & TECHNICAL EXPERTISE

- **Biochemistry & Enzymology:** Electrophoresis (Paper, PAGE, SDS-PAGE); Chromatography (Paper, Ion-exchange, TLC, Affinity, Gel-permeation); Centrifugation; Spectroscopy; Enzyme Immobilisation.
- **Molecular Biology & Immunology:** 2-D Electrophoresis, Gel Documentation, PCR, SNP Analysis, DNA Sequencing, Gene Induction & Product Purification, DNA Ligation, Restriction Digestion, Plasmid Preparation, Transformation, Conjugation, Phage Titration, Southern/Western/Northern Blotting.
- **Fermentation Technology:** Lab-scale to 500-litre fermenters; upstream and downstream processing for pilot-scale fermentation products.

Dr. Sachin S. Kulkarni