

Resume

(Up to 14th January, 2026)

Dr. Avinash A. Raut

M.Sc. Ph.D. Microbiology, SET Life Sciences.



**Assistant Professor,
Department of Microbiology,
Yashwantrao Chavan College of Science,
Karad
Vidyanagar, Karad-415124.**

Resume

Name :- **Dr. Avinash Anand Raut**

Designation :- **Assistant Professor**
Department of Microbiology
Yashwantrao Chavan College of Science, Karad
Vidyanagar, KARAD-415124.

Address :- Shree Bunglow, Fort Area,
Near New Water Tank of Fort Area,
Miraj-416410. Dist:- Sangli.
Maharashtra. India.

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E-mail ID :- **rautavinash@gmail.com, avinashraut@aol.in**

Date of Birth :- 13th October, 1983.

Edu. Qualification :- M.Sc. Ph.D. Microbiology, SET *Life Sciences*.

Subject :- **Microbiology (Microbial Ecology and Extremophiles)**

Teaching Experience :- 20 Years Under-Graduate
20 Years Post-Graduate

Publications :- National /International - 22

Conferences :- Paper Presentation/Participation/Workshops - 18
International/National

A) ACADEMIC QUALIFICATIONS :-

| Sr. No. | Examination | Month & Year | Board/University | Grade % |
|--|--|----------------------------------|--|---------|
| 1. | S. S. C. | March- 1999 | Kolhapur Board | 71.56 % |
| 2. | H. S. C. | February – 2001 | Kolhapur Board | 46.17 % |
| 3. | B. Sc. | April – 2004 | Shivaji University, Kolhapur | 60.92 % |
| 4. | M. Sc. | April – 2006 | Shivaji University, Kolhapur | 62.13 % |
| 5. | Ph. D. | 21 st December, 2013 | Shivaji University, Kolhapur | Awarded |
| Title of Ph.D. Thesis :- “Studies on Aerobic, Non-Symbiotic, Nitrogen Fixing Microorganisms From Littoral Soil of Lonar Lake” | | | | |
| 6. | Post Graduate Diploma in Pharma Regulatory Affairs (PGDRA) | July- 2016 | Global Institute of Regulatory Affairs, Pune | 60.00 % |
| 7. | SET Life Sciences | 26 th September, 2021 | Savitribai Phule Pune University, Pune | 60.00% |

B) ADDITIONAL QUALIFICATIONS :- (Courses and Training)

| Sr. No. | Year | Place | Subject |
|---------|----------------|--|---|
| 1. | April, 2004 | Centre for Community Development, Shivaji University, Kolhapur | Laboratory Management and Basic Analysis of Soil, Water and Food |
| 2. | November, 2004 | Training or Workshop organized by Bangalore GeNei at Yashwantrao Chavan College of Science, Karad | Techniques in Molecular Biology |
| 3. | May, 2005 | Warana Sahakari Dudh Utpadak Prakriya Sangh, Ltd, Warananagar. Dist. Kolhapur | In Plant Training of Production and Quality Control Department |
| 4. | May, 2006 | Industrial Quality Control Microbiology Course organized by Dept. of Microbiology, Yashwantrao Chavan College of Science, Karad. | Training of Industrial Pharmaceutical Microbiology |
| 5. | July, 2016 | Global Institute of Regulatory Affairs, Chinchwad, Pune | Post Graduate Diploma Course in Pharma Regulatory Affairs |

ACADEMIC PERFORMANCE

(Up to 21st September, 2024)

International Awards and Recognitions:

1. Patent granted by **Federal Republic of Germany** on 16th may, 2024 entitled “A system for modifying a bacteriological medium for growing aerobic, non-symbiotic alkaliphilic nitrogen fixing bacteria” with number 202024102301. Contributors: Dr. Shyam S. Bajekal, Dr. Arati P. Kamble, Dr. Jaysing U. Patil, **Dr. Avinash A. Raut**, Mr. Kishor A. Sutar.
2. Worked as a reviewer of Nature publishing group journal entitled “Scientific Reports”
3. Research Biography included in a biography publisher, *Marquis Who's Who in the World* 30th Pearl Edition, 2013.
4. Worked as an **ASSOCIATE EDITOR** of the journal entitled “International Journal of Microbiology Research” since October 2010 to October 2011.
5. Working as an active **Member of Advisory Board** of journal entitled “*International Journal of Microbiology Research*”.
6. Working as a **REVIEWER** of International Journal of Microbiology Research, Microbiology Research, British Microbiology Research Journal, American Journal of Experimental Agriculture, Global Research Journal of Microbiology and Advances in Dairy Research.

❖ Shivaji University Activities:

1. Worked as a Paper Evaluator and Moderator for MSc. I and MSc II Microbiology and Biotechnology for various courses **since 2008 to 2023**.
2. Worked as an External Examiner at Karmaveer Bhaurao Patil University's, Yashwantrao Chavan Institute of Science, Satara for M.Sc. Biotechnology Practical Examination held from 6th December, 2022 to 8th December, **2022**.
3. Worked as a paper setter of 02 different papers of MSc 1 and MSc 2 General Microbiology during the academic year **2022-2023**.
4. Worked as a paper setter in online mode of 05 different papers of MSc 1 and MSc 2 General Microbiology during the academic year **2021-2022**.
5. Worked as a paper setter in online mode of 05 different papers of MSc 1 and MSc 2 General Microbiology during the academic year **2020-2021**.
6. Worked as a paper setter in of 02 different papers of MSc 1 and MSc 2 General Microbiology during the academic year **2019-2020**.
7. Worked as an Organizing Secretary in the One Day Online Workshop on “**Changed Syllabus of BSc III Microbiology semester V & VI (Paper XI & Paper XIV)**” organized by IQAC and Department of Microbiology, Yashwantrao Chavan College of Science, Karad in collaboration with Shivaji University, Kolhapur on 06th March, **2021**.

8. Worked as an Organizing Secretary in the One Day National Webinar on “**Living with COVID 19**” organized by IQAC and Department of Microbiology, Yashwantrao Chavan College of Science, Karad in collaboration with Shivaji University, Kolhapur on 14th June, **2020**.
9. Worked as an Organizing Secretary in the One Day National Webinar on “**Living with COVID 19**” organized by IQAC and Department of Microbiology, Yashwantrao Chavan College of Science, Karad in collaboration with Shivaji University, Kolhapur on 14th June, **2020**.
10. Worked as an Webinar Coordinator in the One Day International Webinar on “**Current Perspectives of Microbial Diseases 2020**” organized by IQAC and Department of Microbiology, Yashwantrao Chavan College of Science, Karad in collaboration with Shivaji University, Kolhapur on 5th June, **2020**.
11. Worked as an Organizing Secretary in the One Day National Workshop on “**Intellectual Property Rights**” organized by IQAC and Department of Microbiology, Yashwantrao Chavan College of Science, Karad in collaboration with Shivaji University, Kolhapur on 27th December, **2019**.
12. Worked as a Programme Coordinator for **AVISHKAR 2015-16** and **2016-17** for Smt. Kasturbai Walchand College, Sangli.
13. Worked as a Co-Guide of M.Sc. II Microbiology students for **SEVEN** years as well as Research Guide for B.Sc. III Biotechnology (Entire) for **TWO** years.
14. Worked as **Paper Setter, Examiner** and **Moderator** in theory and practical examination of B.Sc. I, II, III Biotechnology (Entire) for four years.
15. Worked as an active member of Lead College Activities organized by Shivaji University, Kolhapur.
16. Worked as a Programme Coordinator of State Level NSS workshop conducted at Shri Shivaji Mahavidyalaya, Omerga during December, 2009.
17. Helped in upliftment of Quality of Research and Academics related to Microbiology since fifteen years.

RESEARCH PERFORMANCE

(Up to 14st January, 2026)

❖ Research Articles Published

1. Pradnya B. Zambare, Avinash A. Raut, Sunil B. Jadhav, Shivangi S. Kanase (2025). Green Synthesis of Copper Nanoparticles by *Aspergillus niger* and its Application in the Biodegradation of C.I Reactive Black 5 Green Synthesis of Copper Nanoparticles by *Aspergillus niger* and its Application in the Biodegradation of C.I Reactive Black 5. Journal of Applied Bioanalysis, 11(S13), 686-701. <https://doi.org/10.53555/jab.v11si13.1888>
2. Jadhav R. S, Jadhav S. B, Salunkhe S. Y, Pawar K. R, Gejage R. R, Raut A. A. (2025). Production and characterization of an extracellular keratinase from *Streptomyces graminearus*. Production and characterization of an extracellular keratinase from *Streptomyces graminearus*. Journal of Applied Bioanalysis, 11(7), 475-484. <https://doi.org/10.53555/jab.v11i5.498>

3. **Raut AA**, Patil RR, Mulani AA, Patil VR, Shinde SS, Yadav KA, Sutar KA, Patil JU, Mali GV. (2023). Biosynthesis of silver nanoparticles by some microorganisms isolated from jewellery shop waste. *Res. Jr. Agri. Sci.* 14(5): 1135-1146.
4. Sutar KA, **Raut AA**, Shaikh NR. (2023). Isolation and biochemical characterization of phosphate solubilizing bacteria from soils of some regions of Satara district. *Res. Jr. Agril Sci.* 14(1): 212-216.
5. Nangare Varsha S., **Raut A. A.**, Rawal R.V., Padule A. R., Chavan Shubhangi S., Sarojan Patole. Isolation and Characterisation of bacteria from herbal tablets used in the treatment of Rheumatoid arthritis. Conference Full Length Paper published in National Conference on Biodiversity and Biosciences (NCOBAB-2022)-Research Book (Balwant College, Vita (M.S.) India 415 311 held on **29th December, 2022.**
6. **Avinash A. Raut**, Anirudha H. Patil, Amir D. Mulla, Omkar S. Chougale, Viresh V. Kumbhar, Prasad B. Hasole, Kirti A. Yadav, Kishor A. Sutar, Jaysing U. Patil (**December, 2022**). Effect of Electromagnetic radiations of a mobile phone on the growth of some pathogenic bacteria. *Mukt Shabd Journal (UGC Care List Group-I)* Vol. XI, Issue XII. pp: 259-280.
7. **Avinash A. Raut**, Pratiksha D. Magdum, Aadesh S. Kulkarni, Deep N. Thakkar and **Pranay P. Patil (April, 2020)** Cost Effective Cultivation of *Spirulina platensis* by Using Fish Waste Hydrolysate. Accepted as a Invited Book chapter in Recent Progress in Microbiology and Biotechnology published by Book Publisher International, **United Kingdom.**
8. **Raut AA**, Phugare SS, Kalyani DC, Bajekal SS. Biotreatment of paper mill effluent using Alkaliphilic *Rhizobium* sp. NCIM 5590 isolated from meteoric alkaline Lonar Lake, Buldhana District, Maharashtra, India. *Lakes & Reservoirs: Research and Management* **2018**;00:1-9 <https://doi.org/10.1111/lre.12216> **A Wiley Inc.** Journal.
9. Mamata P. Abhyankar, Tanaji B. Sawant, Arif A. Mulani, Geetanjali S. Patil, Suryakant S. Wadkar, **Avinash A. Raut (2019)** Biocontrol of biofilm produced by *Pseudomonas aeruginosa* using extremely halophilic Marine bacteria isolated from Malvan region. *EC Microbiology* 15:7.536-544.
10. Anup A Tamgave, Shreyas T Tamgave, **Avinash A. Raut**, Suryakant S Wadkar and Jai S Ghosh**Nutritional Characteristics of the Pulp of the Fruit *Annona cherimola* Mill. and its Related Ethnomedicinal Properties*". *EC Nutrition* 13.10 (**2018**): 645-648.
11. **Raut A. A.**, Lokare S. S. and Bajekal S. S. (**2012**) "Ice Nucleating Bacteria in Hailstones during a Hailstorm Over Karad, India." *Current Science*. 103(9) pp 990-991. **SCOPUS Five Year Impact Factor: 1.11.**
12. Supanekar S. V., Sorty A. M. and **Raut A. A. (2013)** "Study of Catechol Siderophore from a Newly Isolated *Azotobacter* sp. SUP-III for its Antimicrobial Property" *J. Microbiol. Biotechnol. Food Sci.* 3(3) 270-273. **Impact factor: 0.3886.**
13. Supanekar S. V., Sorty A. M. and **Raut A. A. (2013)** "Catechol siderophore produced by *Klebsiella pneumoniae* isolated from rhizosphere of *Saccharum officinarum* L." *International J. Sci. Res.* 2(5) 423-425. IIFR (IFJ) **Impact factor: 0.3317.**

14. Bartakke G.R., Suryawanshi M.V. **Raut A. A.** and Gandhi M.B. (2011) "Isolation and Characterization of Camphor Degrading Bacteria" *Int. J Adv. Biotechnol. Res.* 2(4). Pp 468-472.
15. **Raut A.A.** and Bajekal S.S. (2011), "An agar degrading diazotrophic actinobacteria from hyperalkaline meteoric lonar crater lake - a primary study" *Microbiol Res.* Vol.3(1)e:10, pp-37-40. An Italian Journal. **Index Copernicus Value: 4.85. Citations: 1.**
16. Kamble, P P. **Raut A. A.** and Gandhi, M.B., (2011), "Isolation and Characterization of Vegetable Oil Degrading Bacteria" Accepted for Publication in *Journal of Pure and Applied Microbiology*, 5(2). **SCOPUS IMPACT FACTOR-0.073.**
17. Kamble, P P. **Raut A. A.** and Gandhi, M.B., (2011), "Isolation and Characterization of Vegetable Oil Degrading Yeasts" 384-389. *Journal of Pure and Applied Microbiology*, 5(1),. A SCIE Indexed Journal **SCOPUS IMPACT FACTOR-0.073.**
18. **Raut, A. A.** and S. S. Bajekal (2010), 'Growth of Nonsymbiotic Nitrogen Fixing Microaerophiles from Lonar Lake on Inorganic Medium of Martian Soil Simulant Components.' *J. Pure Appl. Microbiol.* 4(2): 819-822. **SCOPUS IMPACT FACTOR-0.073.**
19. Butale S.V., **Raut A. A.** and Sawant T.B., (2010), "Application of Moderately Haloalkaliphilic Nonsymbiotic Diazotrophs of Lonar Lake to saline Soils". *International Journal of Microbiology Research*, 2(2), pp. 01-04. An open Access Journal. **Index Copernicus Value: 4.20. NAAS rating: 3.91. Citations: 1.**
20. **Raut, A. A.** and S. S. Bajekal (2009), 'Nitrogen Fixing Actinomycetes from Saline Alkaline Environment of Lonar Lake: A Meteorite Impact Crater.' *J. Environ. Res. Dev.* 3(3): 784-789. **Impact Factor – 1.268. Citations: 2.**
21. **Raut, A. A.** and S. S. Bajekal (2008), 'Nitrogen Fixing Bacteria from Hypervelocity Meteorite Impact Lonar Lake.' *Res. J. Biotechnol. (Special Issue)* pp. 357-358. **SCOPUS Impact Factor: - 0.262.**
22. **Raut, A. A.** (2008), "Quality Curd production from Consortium of Homemade Curd Samples" *Res. J. Biotechnol. (Special Issue)* pp. 393-398, **SCOPUS Impact Factor: - 0.262.**

Hands on Skills:

1. Hands on experience of guiding Biotechnology related **Entrepreneurship proposals** and **Research Projects** of B.Sc. III students of Biotechnology.
2. Hands on experience of assisting the associate professors in documentation of **ISO** and **NAAC certification audits**.
3. Hands on working experience of Isolation and biochemical characterization of bacteria, actinomycetes, light microscopic staining techniques, primary physical mutagenic experiments, isolation of bacteriophages from sewage samples, etc.
4. Hands on experience of isolating ice nucleating bacteria from inner core of hailstones and purifying their ice nucleating protein.
5. Hands on experience of isolating bacteria responding to microgravity.
6. Hands on experience of isolating bioluminescent bacteria from marine animals.
7. Hands on working experience in construction of phylogenetic trees of 16S rRNA sequences of bacteria and actinomycetes using MEGA software and drawing % similarity, 3D visualization of proteins and enzymes using RASMOL, Cn3D.
8. Hands on working experience of UV-Visible Spectrophotometer, Agarose gel electrophoresis.

❖ **National/ International Conferences, Seminars and Workshops attended and paper presented**

1. Presented an oral research paper in a National Conference on Biodiversity and Biosciences (NCOBAB-2022) entitled “Isolation and Characterisation of Bacteria from herbal tablets used in the treatment of *Rheumatoid arthritis*” held on 29th December, **2022**.
2. Presented an oral research paper in an International Conference on Biotechnology for Better Tomorrow (ICBBT-2022) held at Department of Biology, Faculty of Mathematics and Natural Sciences, Udayana University, **Bali, Indonesia** in collaboration with Vidya Pratishthan’s Arts, Science and Commerce College, Baramati, India from 29th and 30th October, **2022** entitled “Biodiversity of Extremophilic Nitrogen Fixing Bacteria from Lonar Lake, Maharashtra, India”.
3. Attended an International Workshop at MCC-NCCS Pune on 9th and 10th September, **2016** entitled “Nomenclature of Archaea and Bacteria”.
4. Participated in an International Conference on Contemporary Research in Chemical and Life Sciences ICCRCLS-2015 held at Sadguru Gadage Maharaj College, Karad in collaboration with Shivaji University, Kolhapur from 22nd to 23rd April **2015**.
5. Attended an International Webinar on Advances in Life Sciences (WEBLS-2012) organized by Department of Microbiology, Shivaji University, Kolhapur in association with Indian Research Scholar Association for Promoting Science (IRSAPS) on 21st January, **2012**.
6. Presented an oral research paper entitled “Nitrogen Fixing Bacteria from Lonar Lake can Grow on MARS Soil Simulant Components” in International Congress of Environmental Research-2011 held at Surat, Gujarat from 15th to 17th December **2011**.
7. Presented an oral research paper entitled “Nitrogen Fixing *Halomonas sulfidaeris* and *Halomonas venusta* isolated from Lonar Lake” in International Congress of Environmental Research-2011 held at Surat, Gujarat from 15th to 17th December **2011**.
8. Presented a poster of a research paper entitled Microaerophilic Nitrogen Fixing Microorganisms from Hypervelocity Meteorite Impact Lonar Crater in an International Conference “Advances in Biosciences: from Darwin to Dolly & Beyond...” from February 12 -14, **2009**.
9. Presented an oral research paper entitled “Extremophilic Nitrogen Fixing Microorganisms from Lonar Crater Lake” in a National Conference of Recent Trends in Biopesticides and Biofertilizers held at Sadguru Gadage Maharaj College, Karad from December 23 -24, **2009**.
10. Presented a poster of a research paper entitled “A Haloalkaliphilic Nitrogen Fixing Bacteria, *Halomonas Sulfidaeris* Isolated from Littoral Soil of Lonar Crater Lake” in a National Conference AMI-2009 from December 15 -18, **2009**.
11. Presented an oral research paper entitled “Nitrogen Fixing Actinomycetes from the Saline Alkaline Environment of Lonar Lake, A Meteorite Impact Crater” in International Congress of Environmental Research-2008 held at BITS Pilani, Goa Campus from 18th to 20th December **2008**.
12. Presented an oral research paper entitled “Nitrogen Fixing Bacteria from Hyper Velocity Meteorite Impact Lonar Crater” and “Quality Curd Production from Consortium of Home made Curd Microorganisms” in an International Conference ISBT-2008 held at Gangtok, Sikkim, INDIA from 28th Dec. to 30th Dec. **2008**.

13. Presented an oral research paper entitled “Nitrogen Fixing Bacteria Isolated from Littoral Soil of Lonar Crater Lake” in a National Conference on Biotechnology and Conservation of Natural Resources held at Gopikabai Sitaram Gawande College, Umardhed, Dist-Yavatmal during January 11-12, **2008**.
14. Presented an oral research paper entitled “Non-symbiotic Nitrogen Fixing Bacteria from Lonar Lake” in a National Conference Modern Approaches and Innovations in Biotechnology and Biodiversity Conservation held at Shri Shivaji College, Amravati from December 08 -10, **2007**.

All the information given in the above resume is **TRUE** to the best of my knowledge.

Dr. Avinash A. Raut