

## CURRICULUM VITAE

**Name** : **Dr. SUNIL TRIMBAK PAWAR**

**Date of birth** : 28 – 05 – 1968

**Nationality** : Indian

**Marital Status** : Married

**Residential address** : “Kamal Smarti”, 46 Tapowan Colony,  
Tandulwadi road, Baramati,  
Dist- Pune, Pin- 413102  
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**Official address** : Department of Microbiology  
Tuljaram Chaturchand College,  
Baramati, Dist- Pune 413102  
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### **Education:**

1986 – 1989 : **B.Sc** Microbiology (70%)

University: Shivaji University, Kolhapur, M. S., India

1989 – 1991 : **M. Sc** Microbiology (62%)

University: Shivaji University, Kolhapur, M. S., India

2004 – 2009 : **Ph.D** Microbiology

University: North Maharashtra University, Jalgaon, M. S., India

Place of work: School Of Life Sciences,

North Maharashtra University,

Jalgaon, M. S., India

Ph.D Guide: Dr. Pravin R. Puranik

Thesis: Studies on ecological and biotechnological aspects of halotolerant cyanobacteria

## Achievements:

- **First Prize** for best Paper Presented at State Level conference at Adarsh Mahavidyalaya, Omerga, Dist. Osmanabad, (2009) for paper entitled, “Bioremediation of saline soils using halotolerant cyanobacteria”.
- **First Prize** for Paper Presented at C.V. Raman Memorial Seminar held at North Maharashtra University, Jalgaon on 28th Feb 2007, Paper entitled, “Extraction and purification of Cyanobacterial phycocyanin from halotolerant cyanobacteria”.
- **Second Prize** for best Poster Presented at State Level Conference on “Recent Trends in Microbial Biotechnology”, held at R.C. Patel College, Shirpur. Dist: Dhule. M.S., 7-8 Feb 2007. Poster entitled, “Screening of Exopolysaccharides Producing Halotolerant Cyanobacteria”.
- **Second Prize** at the First Avishkar, an Inter-University Presentation Competition held at North Maharashtra University, Jalgaon, 15-16th Dec.2006, Paper entitled, “Biopotentials of Halotolerant Cyanobacteria”.
- **First prize (Best Poster Presentation Award)** at an international conference; Third global sustainable biotech congress, 2014 Dec.1–5,2014 at North Maharashtra University, Jalgaon, India
- **Employment History:**

| Sr. No. | Year                   | Post                                 | College   |
|---------|------------------------|--------------------------------------|---|
| 1       | 1991-1992              | Part Time Lecturer                   | Department of Microbiology,<br>Tuljaram Chaturchand College,<br>Baramati, Dist- Pune 413102 |
| 2       | 1992-1998              | Lecturer                             |   |
| 3       | 1998-2003              | Senior Lecturer                      |   |
| 4       | 2003-2006              | Selection Grade Lecturer             |   |
| 5       | Aug 2004- March 2005   | Head of the Department               |   |
|         | 2003-2005              | COC-Coordinator                      | Clinical Pathology, Microbiology department, T. C. College, Baramati                        |
| 6       | March 2005- March 2007 | On FIP (Faculty Improvement Program) | Ph. D work at School Of Life Sciences, North Maharashtra University, Jalgaon, M. S., India  |
| 7       | Aug 2009- Jan 2010     | Reader                               | Department of Microbiology,<br>Tuljaram Chaturchand College,<br>Baramati, Dist- Pune 413102 |
| 8       | June 2006- Till date   | Associate Professor                  |   |
| 9       | JUNE 2007 – MARCH 2014 | Post graduate Co-ordinator           |   |

|           |                     |                    |  |
|-----------|---------------------|--------------------|--|
| <b>10</b> | Feb-2020 till today | Head of Department |  |
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### Teaching Experience:

- ✓ **Twenty nine years** teaching experience as undergraduate faculty in Microbiology at Department of Microbiology, Tuljaram Chaturchand College, Baramati, Dist-Pune.
- ✓ **Twelve years** teaching experience as a postgraduate faculty in Microbiology at Department of Microbiology, Tuljaram Chaturchand College, Baramati, Dist-Pune.
- ✓ **Courses taught:** General Microbiology, Immunology, Medical Microbiology, Biochemistry, Fermentation technology, Food and Dairy Microbiology, Soil and Agricultural Microbiology, Environmental Microbiology and Agricultural Biotechnology.

### Research Publications: [Citation-84, h-index-3, i 10-index-2]

1. **Sunil T. Pawar** and Pravin R. Puranik, 2008, Screening of Halotolerant Cyanobacteria for antifungal activity, *World journal of Microbiology and Biotechnology*, 24(7): 1019-1025 ( IF-1.5,Citation-15)
2. **Sunil T. Pawar**, Amarsinh A. Bhosale and Pravin R. Puranik. 2013, Ecology and Biodiversity of cyanobacteria from saline soils. *Eco. Env. & Cons.* 19 (2): 437-444
3. **Sunil T. Pawar**, Amarsinh A. Bhosale, Trishala B. Gawade and Tejswini R. Nale. 2013, Isolation, Screening and optimization of exopolysaccharide producing bacterium from saline soil. *J. Microbiol. Biotech. Res.*, 2013, 3 (3):24-31 (Citation-14)
4. **Sunil T. Pawar** and Pravin R. Puranik, 2014, C-phycoyanin production by halotolerant cyanobacteria. *Phykos*, 44(1):25-35. (Citation-1)
5. **Sunil T. Pawar**, 2015, Screening and characterization of Pesticide Degrading cyanobacteria from Pesticide contaminated Agricultural Soil. *Phykos*, 45(1):85-91. (Citation-1)
6. Bhosale Amarsinh, Puranik Pravin and **Pawar Sunil**, 2016, Screening and optimization of indole 3 acetic acid producing non-heterocystous cyanobacteria isolated from saline soil. *Scholars Academic Journal of Biosciences*,4(9); 738-744
7. **Sunil T. Pawar**, Bhosale Amar, Mulani Pravin, Patekar pancharatna and shaha Swarali. 2017, Screening of silver nanoparticles producing Cyanobacteria and its characterization. *Int. Res. J. of Science and Engineering*, Special issue A1: 44-54
8. **Sunil T. Pawar**, Supriya M.Rane, Pravin R. Puranik. Studies of Plant Growth Promoting Rhizobacterial Inoculants on Sugarcane in Saline Soil. *International Journal of Pharmacy*

and Biological Sciences, Volume 9, Special Issue 2- ICESMT 2019, 168-178, 7-9 February 2019

9. Amol Salunke, Ashwini Udande, Sachin Taware, Amarsingh Bhosale and **Sunil Pawar**, Isolation, Characterization and Identification of Probiotic Lactic Acid Bacteria and Bacteriocin Production, International Journal of Pharmacy and Biological Sciences Volume 9, Special Issue 2- ICESMT, 2019, 36-43
10. Amarsinh A. Bhosale, **Sunil T. Pawar** and Pravin R. Puranik Augmentation of Halotolerant Cyanobacteria to Restore Soil Properties and Promote the Plant Growth in Saline Soils International Journal of Pharmacy and Biological Sciences Volume 9, Special Issue 2- ICESMT, 2019, 19-35.
11. Jadhav S. D., **Pawar S. T.** and Karad D. D. 2019. Extended and Pan-drug resistance in *Klebsiella pneumoniae* due to Carbapenemase and Extended Spectrum beta-lactamase enzymes. Journal of medical science and clinical research, volume 7 issue12.
12. **S. T. Pawar**, A. A. Bhosale, S. S. Gaikwad and J. Ayyadevra. 2020. Extracellular Biosynthesis of Silver Nanoparticles using Bacterial isolate from saline soil. 2020. Journal of Nanoscience and Technology.

### **Indian Patents: 01**

Puranik P.R., Deshmukh D.V., Pandav P.V., Patel V.E., **Pawar S.T.** and Puranik K.P. (2010) Natural blue pigment and process for producing the same. (Indian Patent Appl. No. 689/MUM/2010 dt 15.03.2010).

### **Research Projects:**

1. Title: “Cyanobacterial Bioaugmentation of pesticide contaminated soil” (February 2008 – January 2010), Principal investigator: Dr. Sunil T Pawar, Department of Microbiology, Tuljaram Chaturchand College, Baramati, Amount: Rs. **2, 00, 000/-**, (BCUD, University of Pune, Pune).
2. Title: “Algal soil-acclimatizers for cultivation of plantlets in saline soil” (March 2011 – February 2014), Principal investigator: Dr. Sunil T Pawar, Department of Microbiology, Tuljaram Chaturchand College, Baramati, Co-Investigator: Dr. Pravin R. Puranik, School of Life Sciences, North Maharashtra University, Jalgaon, Amount: Rs. **8, 70, 807/-**, (UGC, New Delhi).
3. Title: “Bioremediation of salt affected soils using halotolerant PGPR and cyanobacterial inoculants” (2013- 2016), Principal Investigators: Dr. Pravin R. Puranik, School of Life Sciences, North Maharashtra University, Jalgaon and Dr. Sunil T Pawar, Department of Microbiology, Tuljaram Chaturchand College, Baramati, Amount: Rs. **46.15 Lacks**, (DBT, New Delhi).

### **Areas of Research**

1. General Microbiology

2. Soil and agricultural Microbiology
3. Environmental Biotechnology
4. Taxonomy and ecobiology of cyanobacteria including survey, isolation, purification, identification and establishment of cyanobacterial germplasm.
5. Pesticide Degradation by Cyanobacteria.
6. Bioaugmentation of pesticide contaminated soil by cyanobacteria
7. Medical microbiology

### **Research experience:**

1. **Studies on ecological and biotechnological aspects of halotolerant cyanobacteria**  
The Ph.D research work deals with the ecology and diversity of cyanobacteria, their Metal Biosorption, C- Phycocyanin Production and exopolysaccharide production were done. In this work, a new strategy, viz. Antifungal activity of halotolerant cyanobacteria was employed. Also use these halotolerant cyanobacteria for the amelioration of saline soil.
2. **Cyanobacterial Bioaugmentation of pesticide contaminated soil**  
This research work deals with the isolation and characterization of cyanobacteria from pesticide contaminated soil and their pesticide tolerance.
3. **Biotechnological application of cyanobacteria**  
Cyanobacterial cultures are isolated from different habitats. These cultures are being studied for their pesticide tolerance, Exopolysaccharide production and Plant growth hormone production.
4. **Antibiotic or multi drug resistances of human pathogens**  
Human pathogens are isolated from clinical samples. These pathogens are studied for their resistance towards antibiotics, their minimum inhibitory and bactericidal activity, isolation and detection of plasmids from antibiotic resistant or multi drug pathogens and plasmid curing.
5. **Production and characterization Silver Nanoparticles**  
Cyanobacterial and bacterial cultures are tested for the new scientific field that is Nanotechnology. These cultures are used for the production of silver nanoparticles. These nanoparticles are characterized and tested for their different application like antibacterial, antiviral, antiinsecticidal, antifungal and antiprotozoal activity.

### **Recognition as a research guide:**

1. Subject: Microbiology Ph. D (By Research), Faculty-Science

Ref No. NMU/11/PGR/Life Sci/2300/2013, dt: 12<sup>th</sup> November 2013

North Maharashtra University, Jalgaon-425001, Maharashtra, India

2. Subject: Microbiology Ph. D (By Research), Faculty-Science

Ref No. SUS/BCUD/PGBUTR/2013-14/1316, dt: 06<sup>th</sup> May 2014

Solapur University, Solapur-413255, Maharashtra, India

3. Subject: Microbiology Ph. D (By Paper and By Research), Faculty-Science

Ref No. BUTR/Science/08/442, dt: 23<sup>rd</sup> April 2015

Savitribai Phule Pune University, Pune-411007, Maharashtra, India

## **Ph. D Students**

### **Degree awarded:**

1. Mr. Amarsinh Arvind Bhosale, Subject: Microbiology, Date of Registration: 06/05/2013

University: North Maharashtra University, Jalgaon-425001, Maharashtra, India

Topic: Studies on plant growth promoting cyanobacterial inoculants for the development of nursery plantlets in saline soil. **Degree awarded march-2018.**

### **Registered- 04; Ph D completed :01**

2. Ms. Manisha Gorakh Jadhav, Subject: Microbiology, Date of Registration: 01/01/2015

University: Solapur University, Solapur-413255, Maharashtra, India

Topic: Studies on antibiotic resistance of *Acinetobacter baumannii* isolated from clinical samples.

3. Ms. Suman Dattatray Jadhav, Subject: Microbiology, Date of Registration: 01/01/2015

University: Solapur University, Solapur-413255, Maharashtra, India

Topic: Studies on antibiotic resistance of *Klebsiella pneumoniae* isolated from clinical samples.

4. Ms. A. Neelima Devi, subject Microbiology, March, 2018. University: Savitribai Phule Pune University, Pune.

5. Mr. Avinash Kalumbe, Subject Microbiology, Jan-2119. University: Savitribai Phule Pune University, Pune.

### **Co-curricular and Extra-curricular activities:**

- Coordinator for the COP courses funded by UGC from 2003-2005.

- Life Member of Biotechnological Research Society of India (BRSI).
- Life Member of Association of Microbiologist of India (AMI).
- Life Member of Microbiologists society of India (MSI).
- Life member of Biotechnological Research Society of India (BRSI)
- Coordinator for M.Sc. Microbiology, Microbiology Department, Tuljaram Chaturchand College, Baramati from 2007- 2014.
- (7-9 Feb 2019) worked as a “**Organizing secretary**” International conference: Empowering Society with Microbial Technology, organized by Department of Microbiology, Tuljaram Chaturchand College, Baramati Dist Pune
- Delivering scientific talks at conferences, refresher courses on variety of topics related to Microbiology and Biotechnology.

### **Workshops attended:**

1. Participated a workshop on “Research Techniques in Cyanobacteriology and Bioinformatics Techniques” organized by National Facility for Marine Cyanobacteria and Bioinformatics Centre, Bharatidasan University, Tiruchirappalli, Tamil Nadu.
2. Participated in the First INDO-US LECTURE SERIES on “Discrete Mathematical Chemistry” jointly sponsored by (IUSSTF) and (DST) held at PES Institute of Technology, Bangalore, India (8-11 Jan 2007).
3. Participated in one day workshop on “Academic Performance Indicators with reference to 6<sup>th</sup> pay commission” at M. S. Kakade College, Someshwar, Tal- Baramati, Dist-Pune (19 Sept 2010).
4. (11-12 Nov. 2014) participated in the workshop organized by Arti institute of Rural technology for preparation of coal from plant waste material” at Phaltan Dist Satara M.S.
5. Participated in Two days workshop on “T. Y. B. Sc. Microbiology Syllabus Discussion, Organized by BCUD and Savitribai Phule Pune University, Pune( 30 -31 Jan 2015)

### **Conference/Seminar attended (2005-2019):**

1. (Nov 19-21, 2005.) **Presented Paper** entitled “Biotechnological potentials of salt tolerant unicellular cyanobacterium, *Synechococcus* sp. isolated from sulfur spring” at **National Conference** on “Futuristic Trends in Biotechnology” organized by **Vellore Institute of Technology, Vellore, T.N**

2. (Feb 5-6, 2006) **Presented Paper** entitled, “Halotolerant Cyanobacterial Biodiversity of Saline Soils and its Applications in Biotechnology” at **National Conference** on Recent Trends in Environmental Science” organized by **ASC College, Chalisgaon,**
3. (Sept 27-28 2005) Attended the **National seminar on Intellectual Property Rights** organized by **North Maharashtra University, Jalgaon**
4. (Feb 2-3, 2006) Attended a Seminar on “**Integrated Pest Management**” organized by School of Life Sciences, NMU, Jalgaon under UGC-SAP
5. (Feb.20-March3,2006) **Participated in Workshop on Research Techniques in Cyanobacteriology and Workshop on Bioinformatics Techniques (WORTIC and WOBIC-2006)** conducted by National Facility for Marine Cyanobacteria and Bioinformatics Centre, **Bharathidasan University, Tiruchirappalli, T.N.**
6. (2-4 Nov 2006) **Presented a poster** on Screening of Halotolerant Cyanobacteria for Antifungal Activity.3rd convention of BRSI and **International conference** on Exploring Horizon’s in Biotechnology: A Global Venture held at **Department of Biosciences, Sardar Patel University Vallabh Vidyanager, and Gujrat, India.**
7. (15-16 Dec.2006) **Presented a paper**, “Biopotentials of Halotolerant Cyanobacteria”. At First Avishkar Interuniversity Competition held at **North Maharashtra University, Jalgaon. ( 2<sup>nd</sup> Prize Winner )**
8. (8-11 Jan 2007) **Participated** in the **First INDO-US LECTURE SERIES ON DISCRETE MATHEMATICAL CHEMISTRY** jointly sponsored by (IUSSTF) and (DST) held at **PES Institute of technology, Bangalore, India.**
9. (7-8 Feb 2007) **presented a poster**, “Screening of Exopolysaccharide producing Halotolerant Cyanobacteria”. **State Level Conference** on Recent Trends In Microbial Biotechnology, held at **R. C. Patel College, Shirpur, Dist-Dhule. M.S. (2<sup>nd</sup> Prize winner)**
10. Screening of halotolerant cyanobacteria for commercially important metabolites, presented as a resource person at the **National Conference** held at **Shree Shivaji Mahavidyalaya, Barshi, 12-13 Feb 2007.**
11. (15-17 Feb 2007) **Presented a Paper** entitled, “Biopotentials of Halotolerant Cyanobacteria” was presented representing North Maharashtra University at the **First Avishkar Interuniversity (state level) Competition held at Sant Tukdoji Maharaj Nagpur University, Nagpur.**
12. (24<sup>th</sup> Feb 2007) Attended the UGC–SAP SEMINAR, on Recent Trends In Agrobiotechnology at School Of Life Sciences, North Maharashtra University, Jalgaon.
13. (28<sup>th</sup> Feb 2007) **Presented a paper**, “Extraction and purification of Cyanobacterial Phycocyanin from Halotolerant Cyanobacteria”. **C.V. Raman Memorial Seminar, held at North Maharashtra University, Jalgaon. (1<sup>st</sup> prize winner)**
14. (19-20 Nov, 2007) **presented a poster**, “Antifungal activity of halotolerant Cyanobacteria”. **Innovation-2007, BCUD, held at, University of Pune, Pune.**
15. (14 Feb 08 -1 Feb 08) **presented a poster**, “Screening of Halotolerant cyanobacteria for commercially important metabolites” held at **Vidya Prathisthan’s Arts Commerce and Science college, Baramati Dist Pune**



16. (Dec. 2008) **Presented a poster**, “Cyanobacterial Bioaugmentation of pesticide contaminated soils.” **Innovation-2008, A teacher’s conference Organized by BCUD, University of Pune, Pune** held at Vidya Prathisthan’s Arts Commerce and Science college, Baramati Dist Pune
17. (3<sup>rd</sup> Jan 2009) Attended the UGC–SAP SEMINAR, “Genetically modified crops” at School of Life Sciences, North Maharashtra University, Jalgaon.
18. (Feb: 20-21,2009) **Presented a paper**, “Bioremediation of saline soil by halotolerant cyanobacteria.” **State level conference** on Biotechnology for Rural Development held at **Adarsh Mahavidyalaya, Omerga, Dist. Osmanabad (1<sup>st</sup> Prize winner)**
19. (Dec.19-20, 2009) **Presented a Paper**, “Cyanobacterial Bioaugmentation of pesticide contaminated soils.” **Innovation-2009-10, A Regional teacher’s conference Organized by BCUD, University of Pune, Pune** held at Vidya Prathisthan’s Arts Commerce and Science college, Baramati Dist Pune
20. (Dec.1-4,2009) **Presented a paper**, “Characterization of Extracellular polysaccharide produced by halotolerant Cyanobacteria. “ **7<sup>th</sup> Asia-Pacific International Conference on Algal Biotechnology**” Jointly Organized by **University of Delhi, India and Indian Phycological society, new Delhi, India** held at University of Delhi, India
21. (Feb.25-27,2010) **Presented a poster**, “Screening of halotolerant Cyanobacterial diversity for Phycocyanin Production. “**International symposium on Phycological research**” Organized by Center of Advanced study in Botany, **Banaras Hindu University, Varanasi** University of Delhi, India and Indian Phycological society, new Delhi, India held at University of Delhi, India.
22. (Jan.5,2010) **Participated** In one Day Seminar on “**Mathematics for Biologists**” **sponsored by BCUD, University of Pune** at M. P. College, Pimpri, Pune.
23. (Sept.19,2010) **Participated** In one Day Workshop on “**Academic Performance Indicators with reference to sixth pay commission**” at M. S. Kakade College, Someshwar, Dist. Pune.
24. (Nov.24-26, 2011) **Presented a poster**, “Ecology and biodiversity of cyanobacteria from saline soil. National conference organized by National academy of science, India (NASI). **National Symposium on “Sustainable management of Biodiversity using science and technology.”** At. University of Kerala, Karrivattom, Thiruvananthapuram.
25. (Feb.3-5, 2012) **Chaired the session and presented a poster**, “**21<sup>st</sup> APSI scientists meet 2012 and National Conference on Recent trends in plant sciences**” held at Tuljaram Chaturchand College, Baramati.
26. (Sept. 14-15, 2012), **presented a paper**, in “**New horizon in applied sciences**” at Department of Chemistry, Sharadchandra Pawar Mahavidyalaya, Lonand.
27. (Jan.11-12, 2013), **Presented a poster**, at Yashwantrao Chavan Institute of Science, Satara, **National Seminar on “Applied Microbiology for Globe Protection.”**
28. (Feb, 14-16, 2013) **Presented a Paper**, at Tuljaram Chaturchand College, Baramati, **National Conference on Recent Developments in Mathematics and Statistics.**

29. (Feb, 7-8, 2013), **Presented poster**, at Parvatibai Chowgule College of Arts & Science, Margao, Goa, **National Conference on Plant Sciences**.
30. (Mar 15-16, 2013) **Presented a paper**, at College of Engineering, Pune, **National Conference on Bioengineering**.
31. (June 25-26,2013) **Participated as a resource person**, at R.Y.K. college Nashik, A two day workshop on **“Detailing of credit and semester syllabus of M.Sc. Microbiology”**
32. (28<sup>th</sup> – 30<sup>th</sup> Nov. 2013) Presented a paper, at Shri Shivaji Mahavidyalaya Barshi. Dist Solapur M.S. **UGC sponsored International Conference “Emerging horizons in Biochemical Sciences and Nanomaterials”**
33. (18<sup>th</sup> Feb. 2014) Participated In the **UGC sponsored National Conference on “Modern methods in detection, Identification and Quantification of Microorganisms”** organized by Bharathi Vidyapeeth University, Yashwantrao Mohite college, Pune.
34. (Dec.1-5,2014) **Presented a poster and Chaired a session** at North Maharashtra University, Jalgaon, **at an international conference; Third global sustainable biotech congress, 2014** Dec.1–5,2014 at North Maharashtra University, Jalgaon, India
35. (30 – 31 January 2015) worked as a resource person **In Two days workshop on “T. Y. B.Sc. Microbiology Syllabus Discussion” Organized by S. P. Mahila Mahavidyalaya, Shardanagar and BCUD SPP university, Pune.**
36. (26 Dec. 2015) participated in one day seminar on **“Role of IQAC in Institutional Quality Improvement”** organized by **Tuljaram Chaturchand College Baramati, Dist-Pune M.S.**
37. (23 rd Jan 2016) Participated and Chaired the Session **in one day state level workshop on “Viral Epidemics and Urban Health”** At **H. V. Desai College Pune.**
38. (9 – 10 Feb 2016) Presented a poster entitled, **“Studies on PGPR of saline soil.”** At **ITCPB-2016, Two days International conference, organized by Annasaheb Magar Mahavidyalaya Hadapsar, Pune. M.S.**
39. (11-13 Feb.2016) Presented a poster and Chaired a session in the **“International conference on plant sciences and resource management”** Organized by **T. C. College Baramati, Dist-Pune. M.S.**
40. (17<sup>th</sup>-18<sup>th</sup> Feb 2016) **“Production of Bioinoculants”** Presented a paper at **Two days state level symposium cum workshop held at Vidya Prathisthan’s Arts, Science and Commerce College, Baramati. Dist Pune.**
41. (30 Aug – 1 Sept 2016) **“Cyanobacterial inoculants for sustainable agriculture development”** Presented a paper in the **International conference on “Microalgal and cyanobacterial biotechnology MACB-2016”** organized by **National Facility for Marine Cyanobacteria, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India**

42. (24-25 January 2016) “Cyanobacteria: Laboratory methods & Applications in Biotechnology” Presented a paper at **National Conference on “Recent trends and opportunities in life science”** organized by **Department of Botany, Microbiology and Zoology, PDEA’s Waghire College, Saswad.**
43. (22-23 September 2017) “Studies of halotolerant PGPR inoculants on sugarcane grown in saline soil” presented a paper at **National Conference on Recent trends in Biotechnology and Biodiversity (NCBB-2017)** organized by **Shree Shivaji Science College, Amravati.**
44. (7-9 Dec 2017) “Screening of silver nanoparticles producing Cyanobacteria and its characterization” Presented a paper in the international conference on Applied Nanotechnology and Nanoscience organized by T C College Baramati and Nano and Molecular society (nms) India
45. (11-12 Jan 2018) Studies of halotolerant PGPR inoculants on soyabean grown in saline soil” Presented a poster in a national seminar on Recent trends in plant sciences and Agricultural Research jointly organized by Zonal Agricultural Research station, Solapur And Daynand college of arts and science, Solapur.
46. Studies on PGPR of saline soil 59 th Annual Conference of Association of Microbiologist of (India AMI 2018)
47. (7-9 Feb 2019) Chaired a session and worked as a “**Organizing secretary**” International conference: Empowering Society with Microbial Technology, organized by Department of Microbiology, Tuljaram Chaturchand College, Baramati Dist Pune
48. Presented a paper: Integration of Biological Data for Translation of Sciences organized by Vidya prathisthan’s ASC College, Baramati, Dist. Pune
49. Chaired a session: Microbes for Clean Environment.organised by Taywade College, Mahadulla-Koradi Nagpur and Microbiologist’s Society, India
50. Presented a paper at International Conference organized by Microbiologist society and Q studies male, Maldives on 21-23 Feb 2020.

## **Invited talks**

1. Screening of halotolerant cyanobacteria for commercially important metabolites, **presented as a resource person at the National Conference** held at **Shree Shivaji Mahavidyalaya, Barshi, 12-13 Feb 2007.**
2. “**Cyanobacteria today and tomorrow**”, presented as a resource person at (Refresher course in Life Sciences) **Academic Staff College, University of Pune, Pune, 20<sup>th</sup> Feb 2011.**
3. “**Cyanobacteria, Potential application in Biotechnology** presented as a resource person at (FIP-Short term program) organized by Tuljaram Chaturchand College,

Baramati Sponsored by **Academic staff college, University of Pune, Pune, 15<sup>th</sup>-20<sup>th</sup>oct. 2011.**

4. **Worked as a resource person, at R.Y.K. College Nashik, A two day workshop on “Detailing of credit and semester syllabus of M.Sc. Microbiology” 25-26, June 2013.**
5. **Worked as a resource person In Two days workshop on “T. Y. BSc Microbiology Syllabus Discussion” Organized by S. P. Mahila Mahavidyalaya, Shardanagar and BCUD SPP university, Pune (30-31 January 2015).**
6. **“Production of Bioinoculants” Presented as a resource person at Two days state level symposium cum workshop held at Vidya Prathisthan’s Arts, Science and Commerce College, Baramati. Dist Pune.17<sup>th</sup>-18<sup>th</sup> Feb 2016.**
7. **“Cyanobacterial inoculants for sustainable agriculture development” Presented a paper in the International conference on “Microalgal and cyanobacterial biotechnology MACB-2016” organized by National Facility for Marine Cyanobacteria, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India (30 Aug – 1 Sept 2016)**
8. **“Cyanobacteria: Laboratory methods & Applications in Biotechnology” Presented as resource person at National Conference on “Recent trends and opportunities in life science” organized by Department of Botany, Microbiology and Zoology, PDEA’s Waghire College, Saswad (24-25 January 2017)**
9. **“Cyanobacteria: as a Bioinoculants.”Presented as a Invited Speaker for certificate course and training programme on, Bioprocess Technology for Bioinoculants. at Vidya Prathisthan’s Arts Science and Commerce college, Baramati.(20 Feb 2018)**
10. **Delivered Invited Talk in One Day Workshop on “Bioinoculant Production: Lab to Field & Public Advocacy” organized by Department of Microbiology, VPASC College, Baramati on 5<sup>th</sup> February 2020**