

## **CURRICULUM VITAE**

**Name:** - Jayashree Mahesh Pawar.

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**Marital Status:** - Married

**Date of Birth:** - 23<sup>rd</sup> June 1978

### **Work Experience:**

- Currently working as Coordinator-Biotechnology, Department of Biotechnology and Microbiology, VPM's B. N. Bandodkar College of Science, Thane, since June 2013
- Working as assistant Professor in Department of Biotechnology and Microbiology, VPM's B. N. Bandodkar College, Thane, Since August 2009
- Working as Dy. Controller of Examinations, VPM's B. N. Bandodkar College of Science (Autonomous) since 2022
- Honourable Vice-chancellor nominated member of Board of Studies, Biotechnology, University of Mumbai since October 2023
- Worked as EOMS co-coordinator for ISO 21001: 2018 certification for VPM's B. N. Bandodkar College of Science (Autonomous)
- Working as Chairperson, BOS, Biotechnology, VPM's B. N. Bandodkar College of Science (Autonomous) since 2020
- Worked as Chairperson, TYBSc Biotechnology (Practical), University of Mumbai during July 2018 to December 2019
- Worked on various college committees: Internal Quality Assurance Cell, Purchase Committee, Admission Committee, Magazine Committee, Calendar Committee, Avishkar Coordination Committee, Alumni Committee, committee for writing Application for the 'IMC Ramkrishna Bajaj National Quality Awards', committee for writing Application for CPE award in 2014-15, in VPM's B. N. Bandodkar College of Science
- Currently working as co-editor for JBNB- online research journal of B. N. Bandodkar College of Science
- Worked as Lecturer in Biotechnology, Department of Biotechnology, Fergusson College, Pune, during 2008-2009 for B.Sc. And M.Sc. Courses

- Worked as Lecturer in Biotechnology, Department of Biotechnology, Sinhgad Technical Education Society's Science College, Pune, during 2007-2008
- Worked as a lecturer in Biotechnology with K.J. Somaiya College of Science and Commerce, Vidyavihar, Mumbai, during 2004-2007
- Worked as a lecturer in Biotechnology for B.Sc. And M.Sc. Courses with Birla College, Kalyan, during 2003-2004
- Worked as a JRF for two years on 'combination gene therapy for head and neck cancers' under the guidance of Dr. Rita Mulherkar, Head, Lab of genetic Engineering, Cancer Research Institute, Parel, Mumbai during December 2000-December 2002
- Worked on a dissertation project as a part of M.Sc. Biotechnology course on 'A Molecular approach to study soil microbial diversity' under the guidance of Dr. B. B. Chattoo, Head, Department of Biotechnology, M. S. University of Baroda, Baroda

### **Educational Profile:**

- Completed Ph. D. in Microbiology on 'Studies on Molecular Analysis of Microorganisms Involved in Degradation of Industrial Waste' under the guidance of Dr. D. V. Kamat, Head, Department of Microbiology and Biotechnology, Mithibai College, Mumbai in year April 2016.
- Cleared CSIR-UGC NET examination for lectureship in the year 2000 in subject life sciences
- Cleared 'GATE' in subject Life Sciences in the year 2000
- Passed M.Sc. in Biotechnology with first class (62.27%) from M. S. University of Baroda in 2000
- Cleared JNU entrance examination in June 1998.
- Passed B.Sc. in Microbiology with Biotechnology as vocational subject with first class (67.11%) from Mumbai University in 1998

### **Awards, recognition fellowship at state, national and international level:**

- **Patent Publication:** application number 202021027566 with title METHOD OF STAINING PROTEINS IN NATIVE POLYACRYLAMIDE GEL USING BETALAINS IN BEETROOT EXTRACT published at the IPO on 21<sup>st</sup> January 2022 on the names of **Dr. Jayashree Pawar**, Dr. Kalpita Mulye and Ms. Zahera Momin
- Submitted **45 microbial 16S rDNA sequences of probable novel bacteria** in the international ENA (European Nucleotide Archive) database
- Projects were invited from participants at the Workshop on 'Basic Techniques in Understanding Epigenetics' by the Lady Tata Memorial Trust. Project submitted by Dr. Jayashree Pawar on 'Novel and eco-friendly staining method for proteins separated by polyacrylamide gel' was the ONLY PROJECT selected for execution at Dr. Gupta's Laboratory, ACTREC, Navi Mumbai

- Guided a research project ‘Gut feeling of *Sitophilus oryzae* about LDPE Biodegradation’ which was selected for ‘**WEnyan**’ scholarship introduced by Pune Knowledge Cluster (PKC) in collaboration with BASF chemicals India Pvt. Ltd. for girls from marginalized communities/low-income groups in Maharashtra. The Program has offered Research Scholarship of INR 30,000 (project duration- 3 months) for select 24 students (Category-A).
- Guided a research project “Milk Testing Kit at Your Doorstep” presented by students at the **Final Round of 16<sup>th</sup> Inter-Collegiate Avishkar Research Convention: 2021-22** organized on Virtual Platform by University of Mumbai on May 15, 2022 and won **Gold Medal** at UG level in category ‘Humanities, Languages and Fine Arts’
- Co-guided a research project “Urban Spirulina Terrace: A Potential Remedy for Nutritional and Financial Gap Healing” presented by students at the Final Round of 15<sup>th</sup> Inter-Collegiate Avishkar Research Convention: 2020-21 organized on Virtual Platform by University of Mumbai on June 23, 2021 and won silver medal at UG level in category ‘Agriculture and Animal Husbandry’
- Received ‘**Vishesh margadarshak puraskaar**’ from **Marathi Vidnyaan Parishad** for guiding research project titled “Novel and eco-friendly staining method for proteins separated by Polyacrylamide gel electrophoresis in January 2019
- Co-guided a winning research project “Culturomics based approach for isolation of novel PGPRs” presented by students at State Level ‘Vidhyan Sanshodhan Puraskar Spardha’ organized by Marathi Vidnyan Parishad in January 2019
- Co- guided the research project on Microbial Fuel Cell which was selected at zonal level at TERI- 'New Zealand-India Sustainability Challenge' (out of 250 applicants) in September 2017
- Guided a research project “Hidden Treasure from Vermiwash as an Agricultural Boon” presented by students at “Unge Forskere”, 29<sup>th</sup> International young scientist fest and contest held at Copenhagen, Denmark on 22<sup>nd</sup> to 26<sup>th</sup> April 2017 and won Gold medal in International Category
- Guided a research project “Biodegradation of LDPE plastic” presented by students at “Unge Forskere”, 28<sup>th</sup> young scientist fair and contest held at Copenhagen, Denmark during 22<sup>nd</sup> to 26<sup>th</sup> April 2016 and won Bronze medal in International Category
- Has been guiding mini research projects by undergraduate students, three of which were selected for zone level and one for district level of Avishkar- research convention organized by Mumbai University in year 2013 and 2015 and 2017
- Was invited as rapporteur for a session at National conference on ‘Ecopulse: Monitoring Beats of Ecosystem’ held in February 2025

**Recent research contributions:**

- Reviewer for indexed journals- Journal of Environmental Biology and Journal of Advances in Microbiology
- Video on official YouTube channel, website and social media forums of Bentham Science Publishers:

<https://youtu.be/vWgtngD4Zgc?si=M3Nkk6oD434zKp84>

**Publications:**

- Jayashree, P., Kalpita, M., Judith, T., & Ashwin, K. Micro RNAs: The Tiny Black Box in Diagnostics! (2025). JBNB, 13:79-88. ISSN 2454-2776. ([https://vpmthane.org/BNB/JBNB/JBNB2025/RA\\_3.pdf](https://vpmthane.org/BNB/JBNB/JBNB2025/RA_3.pdf))
- Jayashree, P., Kalpita, M., Judith, T., & Ashwin, K\*. Bio-Engineered Gut Microbiota for Drug Delivery: Novel Propitious Realm. In Probiotics (pp. 251-281). CRC Press.
- Pawar J., Mulye K., Talker J., Singh S., Kotnis A\*. Role of non-coding RNA in hypoxic tumours and their potential as biomarkers for early detection of cancer. Accepted in Current Molecular Medicine Vol-24 Issue-5 (Scopus indexed, Impact Factor 2.5)
- Pawar J.\*, Mulye K., Talker J., Talker E., Nikam A. (2023). Isolation of agarose digesting *Achromobacter sp.* and *Brevundimonas diminuta* using customized earthworm gut as an enrichment system. Journal of Environmental Biology, Volume 44 (**Scopus indexed, Impact Factor 0.7**)
- Pawar J., Mulye K., Barve O. (2022). Probable Plastic Biodegradation by Gut-Microflora of Weevil. JBNB, Vol. 12. ISSN 2454-2776 (<http://www.vpmthane.org/BNB/JBNB/JBNB2022/ResearchA3.pdf>)
- Pawar Jayashree, Mulye Kalpita, Shah Purvi, Yadav Laxmi (2022). Study Of Select Isolates from Vetiver Root Microbiota as Potential Immobilized Biofertilizer. Proceedings of National Conference on 'Microbiome: The Story Untold!' ISBN: 978-81-923628-9-2: 26-35
- Mulye, K., Pawar, J., Joshi, S., Neman, M., Gavas, K., Kale, H. (2022). Isolation Of Novel PGPR from Vermiwash Microbiota. Proceedings of National Conference on 'Microbiome: The Story Untold!' ISBN: 978-81-923628-9-2: 35-45
- Pawar, J. and Mulye, K. (2021). Assessment of keeping quality and efficiency of pasteurization of packaged milk samples from vendors of Thane, Maharashtra, India. JBNB, 11:61-72 ISSN 2454-2776.
- Mulye, K. and Pawar, J. (2021). Antimicrobial activity of *Punica granatum*. JBNB, 11:104-115 ISSN 2454-2776.
- Mulye, K., Pawar, J., Momin, Z., Ghatmale, P., Khatri, S., Deshpande, Y. (2017). Evaluation of Synergistic Effect of Vermiwash and *Azotobacter* spp. on Growth of

*Triticum aestivum*. Proceedings of International Conference on 'Emerging Technologies for Sustainable Agriculture'. ISBN: 978-81-92368-4-7: 36-42

- Mulye, K., Pawar, J., Deshpande, Y., Khatri, S., Ghatmale, P. (2017). Evaluation of Synergistic Effect of PGPRs in Consortium on Growth of *Vigna radiata*. Proceedings of International Conference on 'Emerging Technologies for Sustainable Agriculture' ISBN: 978-81-92368-4-7: 55-62
- Pawar, J., Mulye, K., Shah, P. (2017). Isolation of Endophytic and Rhizospheric PGPR Using Nutrient Limiting Plant Based Culture Media. Proceedings of International Conference on 'Emerging Technologies for Sustainable Agriculture' ISBN: 978-81-92368-4-7: 75-79
- Mulye, K., Pawar, J., Momin, Z., Deshpande, Y., Ghatmale, P., Khatri, S. (2017). Comparative Analysis of Vermiwash and *Azotobacter spp.* on Growth of *Vigna radiata* Proceedings of International Conference on 'Emerging Technologies for Sustainable Agriculture' ISBN: 978-81-92368-4-7: 118-125
- Pawar, J., Khandibharad, S., Mishra, A., Mulye, K. (2016). Influence of dilute media on culturability of bacterial flora of thane Creek water. JBNB, 5(1): 582-584 ISSN 2454-2776
- Mulye, K., Pawar, J., Patil, P., Sankpal, D., Bhavsar, A. (2016). Antimicrobial property of *Piper betle* leaf against *Candida albicans*. JBNB, 5(1): 591-4 ISSN 2454-2776
- Mulye, K., Momin, Z., Pawar, J., Deshpande, Y., Khatri, S., Gore, S. (2015). Alternative protocol for negative staining using *Beta vulgaris* extract. International Journal of Development Research, 5(12): 6324 -6326
- Mulye, K., Thorat, V., Talker, J., Talker, E., Raj, A., Pawar J. (2015). Effect of electromagnetic radiations emitted by mobile towers on survival of *E. coli*. IOSR journal of environmental science, Toxicology and food technology, 9(12): 31-34.
- Pawar, J., Kamat, S., Kamat, D. (2015). Isolation of novel paranitrophenol degrading bacteria from ozonated effluent. Bionano Frontier, 8 (2).
- Mulye, K., Pawar, J., Chhatre, A., Bagul, A. (2015). Efficacy analysis of vermicomposting for microbiological waste treatment. Bionano Frontier, 8 (2).
- Pawar, J., Kamat, D., Kamat, S. (2015) A comparative study of ozonated and non-ozonated effluents to screen novel paranitrophenol degraders. Life Sciences international research journal, 2 (special issue): 83-88.
- Mulye, K., Chhatre, A., Bagul, A., Saldhana, H., Murai, R., Pawar, J. (2015). Vermicomposting: A Novel Approach for Microbiological Waste Treatment. JBNB, 3: 118-124 ISSN 2454-2776.
- Pawar, J., Mulye, K., Mahajan, D., Samant, V., Bagwe, T. (2015). Isolation and identification of novel agar digesters in earthworm (*Eisenia fetida*) gut. JBNB, 3: 125-127 ISSN 2454-2776.

- Mulye, K., Thorat, V., Talker, J., Talker, E., Raj, A., Pawar J. (2015). Study of effect of electromagnetic radiations emitted by mobile tower on representative microbial system V. Thorat, S. Sonawane, J. Talker, E. Talker, A. Raj, J. Pawar, K. Mulye: JBNB volume 3 : 2015: 128-131 ISSN 2454-2776.
- Pawar, J., Mulye, K., Bagul, A., Chhatre, A. (2015). Isolation and Identification of LDPE Degrading Organisms from Domestic Sludge Samples. JBNB, 3: 132-136 ISSN 2454-2776.
- Talker, E., Talker, J., Thorat, V., Pawar, J., Mulye K. (2015). Formulation and efficacy of hand sanitizer. JBNB, 3: 137 – 141 ISSN 2454-2776.

#### **Oral presentations:**

- Isolation of Novel Paranitrophenol Degrading Bacteria from Ozonated Effluent: Pawar, J., Kamat, S. and Kamat, D. at the Sajjan Gupta Konark memorial awards organized by K. C. College Churchgate, in January 2015
- A Comparative Study of Ozonated and Non-ozonated Effluents to Screen Novel Paranitrophenol Degraders: Pawar, J., Kamat, D. and Kamat, S. at National Conference on Recent Trends and Innovations In Microbial World at Smt. Chandibai Himathmal Mansukhani College, Ulhasnagar on 15<sup>th</sup> – 16<sup>th</sup> January 2015
- Presented on ‘Creativity and Innovation in VPM’s Commerce & Arts College, Thane’ at conference on “Rising above and beyond excellence’ organized for VPM group of Institutions on 14<sup>th</sup>, 15<sup>th</sup> and 29<sup>th</sup> June 2013
- Encapsulation of *Azotobacter* and phosphate solubilizers as efficient biofertilizers: Priyanka Barmukh, Mansi Lad, Rucha Kulkarni, Kalpita Mulye, Jayashree Pawar at the second workshop FAVEO organized by B. N. Bhandodkar College, Thane, in year 2013
- Was selected for National level ‘Paper Presentation’ competition held by Anna University, Madras, in year 2000. Presented on ‘Repeat Induced Gene Silencing’

#### **Poster presentations:**

- Contributed in poster presentation at “Research Showcase – 2024” at AIIMS-Bhopal: Pawar Jayashree, Mulye Kalpita, Talker Judith, Ahirwar Sonu Singh and Kotnis Ashwin\* (2024) Role of MicroRNA in Hypoxic Tumours and their Potential as Biomarkers for Early Detection of Cancer.
- Pawar, J., Mulye, K., Talker, J., Talker, E., Nikam, A. (November 2018). Earthworm Gut As A Customized Enrichment System For Isolation Of Agarose Digestors. International Conference on Microbiome Research, NCCS, Pune
- Pawar J., Kamat S. and Kamat D. (17<sup>th</sup>-20<sup>th</sup> November 2013). Culture and molecular based analysis of paranitrophenol degrading bacteria in sludge. 54<sup>th</sup> annual International conference on Association of Microbiologists of India (AMI-2013)

- Rai, A., Murai, R., Chougule, P., Pawar, J., Mulye, K. (2013). Use of *Azototobacter*, Phosphate solubilizing bacteria and vermiwash as biofertilizer: Sajjan Gupta Konark memorial awards
- Pawar J., Kamat S. and Kamat D. (2012). Isolation and characterization of microorganisms from sludge using molecular techniques. Sajjan Gupta Konark memorial awards

### **Expertise:**

- Well versed in handling Molecular Biology techniques like DNA and RNA extractions, Gel electrophoresis, Transformation of competent cells, Restriction analysis of clones, Southern and Northern hybridizations, basic Polymerase Chain Reaction, ELISA, DNA sequencing by Sanger's method
- Experience in Animal tissue Culture – General handling of cells under aseptic conditions, Transfection, Preservation of cells under liquid nitrogen, Lymphocyte proliferation assays etc.

### **Conferences and Workshops Organized:**

- Member in organizing 'SVATV: Celebrating the Success of GenomeIndia Project'; featuring an array of activities, including guest lectures, poster presentations, models, street plays, and interactive games, all aimed at explaining concepts like DNA, genetics, heredity, and the GenomeIndia Project to citizens.
- Department of Biotechnology and Microbiology, VPM's B. N. Bandodkar College of Science, in collaboration with VPM College of Engineering
- Worked as organizing secretary, in organizing online National Conference on 'Microbiome: The Story untold!' at VPM's B. N. Bandodkar College of Science, Thane in January 2022
- Involved in organizing symposium on 'Innovative Learning Ecosystems' at VPM's B. N. Bandodkar College of Science, Thane, on 5<sup>th</sup> July 2019
- Worked as organizing secretary, in organizing International Conference on 'Emerging Technologies for sustainable Agriculture' at VPM's B. N. Bandodkar College of Science, Thane in January 2017
- Involved in framing and organizing workshop on 'Techniques in Molecular Biology- level 1' and 'Techniques in Molecular Biology- level 2' at Department of Biotechnology and Microbiology, VPM's B. N. Bandodkar College of Science, Thane, in 2016
- Worked as co-coordinator in organization of Avishkar- a research convention for Thane district level organized at VPM's B. N. Bandodkar College of Science, Thane, in November 2014
- Involved in organizing workshop on 'Basic Microbiological Techniques' at VPM's B. N. Bandodkar College of Science, Thane, in 2014

- Involved in organizing workshop on 'Data Analysis and Representation for Amateur Microbiologist and Biotechnologists' at VPM's B. N. Bandodkar College of Science, Thane, in 2014
- Part of organising committee for the one-day seminar on 'Unveiling life Beyond DNA discovery' held in VPM's B. N. Bandodkar College of science, Thane on 13<sup>th</sup> July 2013
- Has been a part of organising committee for National Conference on Biotechnology in Diagnostics held in VPM's B. N. Bandodkar College of science, Thane, on 6<sup>th</sup> and 7<sup>th</sup> January 2012. Also worked as an editor of the proceedings of the same

#### **Trainings and consultancies offered:**

Actively involved in providing training and consultancy to staff and students, regarding:

Soil analysis

Enzyme assays

antimicrobial testing of chemicals

Basic Biotechnology & Microbiology techniques

set-up of microbiology laboratory

assessment of water potability

#### **Invited Talks:**

- Delivered a talk on '16S rRNA gene Analysis: Important Tool in Microbiome Research' during the first pre-conference workshop of national conference on 'Microbiome: The Story untold!' in September 2021
- Was invited as judge for research project presentation competition 'Jigyasa' at K. C. College, Churchgate, Mumbai, in 2019
- Was invited as judge for fest 'Microscope' at K. J. Somaiya College of Science and Commerce in 2019
- Delivered a talk in workshop organized by IQAC organized on 6-8<sup>th</sup> April 2017 at VPM's B. N. Bandodkar College, Thane
- Delivered lectures on the topics 'Introduction to Agriculture related Molecular Biology Tools and Techniques' and 'GPCRs- basics to advances', as a part of pre- conference lecture series to prepare students for the International Conference on 'Emerging Technologies for sustainable Agriculture' at VPM's B. N. Bandodkar College of Science, Thane in December 2016
- Delivered a lecture on 'Microbial taxonomy: Basic and advances' during the lecture series organized as part of the national conference on 'New and emerging trends in Bioinformatics and Taxonomy, NETBT 2015 held at B. N. Bandodkar college of science on 9<sup>th</sup> January 2015
- Was invited as a guest speaker to deliver a lecture on preparations for T. Y. B.Sc. Biotechnology practicals at Momin College, Bhivandi, Thane, on December 2015



- Delivered a lecture on ‘Encapsulation of Biofertilizers’ and conducted a practical on basic practicals in Microbiology and Biotechnology during refresher course conducted at B. N. Bandodkar college in February 2014
- Conducted a practical session during the Teachers’ refresher course of UGC academic staff College’ in February 2014
- Has been regularly guiding students on ‘Future Prospects in Microbiology and Biotechnology’ at VPM’s B. N. Bandodkar College, Thane, since 2013, as a part of guidance regarding competitive exam preparations
- Was invited as a guest lecturer to deliver a lecture and practical during the ‘clinical trial and management course offered by the Department of Microbiology and Biotechnolgy, Mithibai College, Mumbai on 9<sup>th</sup> May 2012
- Was invited as a guest lecturer to deliver a lecture on ‘Polymerase Chain Reaction’ at the department of Microbiology and Biotechnolgy, Mithibai College, Mumbai on 12<sup>th</sup> and 13<sup>th</sup> October 2012
- Delivered a talk on ‘Molecular diagnostics-PCR’ at workshop of National Conference on ‘Biotechnology in Diagnostics’ held at B. N. Bandodkar College of science, Thane in September 2011
- Was invited as judge for biotechnology festival “BIO GENEI” at K. C. College, Churchgate, Mumbai.on 31<sup>st</sup> August 2010

#### **Activities Undertaken:**

- Involved in organizing career guidance lecture series for students of biotechnology and Microbiology at B. N. Bandodkar College of Science, Thane. Eminent personalities from Research Institutions and industries, and students who have cleared theses examinations are invited to deliver talks followed by discussions with students
- Involved in guiding students for Journal and Movie club activities at B. N. Bandodkar College of Science, Thane, for students of biotechnology and Microbiology. The activity involves presentations of research papers and subject related movies by undergraduate students

Jayashree Pawar, Ph.D.