

Dr. Kalpita Bhushan Mulye
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OBJECTIVE

To be a part of challenging institution which offers scientific development and growth potential, and to further build upon my academic training and experience, to benefit the employer and advance my career.

EDUCATION

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| 2002-2007 | Ph. D. in Microbiology from Haffkine Institute, Parel, Mumbai.
Topic: “ <i>In vitro</i> study of <i>Phyllanthus amarus</i> and other phytochemicals as Anti HIV agents”. |
| 2001 | M. Sc Microbiology, S. I. E. S. College, Mumbai securing a First Class |
| 1999 | B.Sc. with Microbiology (6 Units) and Biotechnology (Applied Component) securing a First Class with distinction |

ADDITIONAL QUALIFICATION

- Basic course in MS-office from ACT Computer Institute, Thane
- Course in “Universal Bio-Safety Precautions” from Haffkine Institute.

WORK EXPERIENCE

- Currently working as Coordinator-Microbiology in Department of Biotechnology and Microbiology, B. N. Bandodkar College, Thane. Since June 2013.
- Currently working as assistant professor in Department of Biotechnology and Microbiology, B. N. Bandodkar College, Thane. Since June 2009.
- Worked as a lecturer in Department of Microbiology, S. I. E.S. College, Sion from Sept. 2001 to Apr. 2002
- Worked on different projects on anti-HIV, Anti- HBV, Cytotoxicity testing funded by following companies and institutions viz. Shreya Life Sciences, Viridis Biopharma Pvt Ltd., T. M. Thakore Ltd, Dr. Palep Research Foundation, Fine Fragrances Pvt Ltd., C. U. Shah College of Pharmacy.
- Conducted lectures and practical for undergraduates and doctors under Annual Biotechnology programme conducted at Haffkine Institute (2003 – 2006)

EXPERTISE

- ELISA techniques for HIV, HIV -p24, HBsAg, Leptospira, & Dengue
- FACS counting for CD4+ and CD8+ cells
- Density gradient centrifugation technique
- Animal Tissue culture (Vero, Hep2 ,H9, MDCK cell lines and Peripheral Blood mononuclear cell culture)
- Specific *in vitro* anti-HIV activity testing of herbal components by reverse transcriptase inhibition assay, gp 120 binding inhibition assay, p24 inhibition assay
- *In vitro* proliferation assays using radioisotopes and by MTT assay
- Anti-HBV activity determination using Reverse transcriptase inhibition and DNA polymerase inhibition assay
- Cytotoxicity testing of samples using XTT
- Testing of viral samples for HSV, CMV through Tissue Culture
- ELISpot assay (IFN)

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 for International Conference on 'Microbiome: The Story untold!' at VPM's B. N. Bandodkar College of Science, Thane in January 2022
- Worked as organizing secretary for International Conference on 'Emerging Technologies for sustainable Agriculture' at B. N. Bandodkar College of Science, Thane. January 2017
- Has been a part of organising committee for National Conference on Biotechnology in Diagnostics held in B. N. Bandodkar College of science, thane on 6th and 7th January 2012.
- Has been a part of organising committee for the one day seminar on 'unveiling life beyond DNA discovery' held in B. N. Bandodkar College of science, Thane on 13th July 2013.
- Has been a part of organising committee for the one day workshop on 'The role of IQAC in quality enhancement' held in B. N. Bandodkar College of science, Thane on 13th July 2013.

- Has organized workshop on 'Basic Microbiological Techniques' (2014)
- Has organized workshop on Data Analysis and Representation for Amateur Microbiologist and Biotechnologists (2014).
- Has organized workshop on 'Immunological techniques' (2015).

CONFERENCE AND WORKSHOPS ATTENDED:

- Attended and presented paper at National conference "College IQAC: meaning and manifestations" organized by Kirti M. Doongursee College, Mumbai on 30th January 2016.
- Attended and presented at Continuing education- conference Rising above and beyond excellence organized by VPM's BRIMS o 16th January 2016, 13 Feb 2016.
- Attended international conference "Aardrabhumi 2016" organized by department of Zoology and Environment Science, on 16th 17th Feb 2016 at B. N. Bandodkar College of Science.
- One day exploratory workshop on quality circle and graduate attributes held at V. G. Vaze College, Mulund, Mumbai on 2nd march 2015.
- Participated in State level one day seminar on Women in science and science for women held at B. N. Bandodkar College of Science on 7th march 2015.
- Participated in two day national conference on 'New and emerging trends in bioinformatics and taxonomy, NETBT 2015 held at B. N. Bandodkar college of science on 14th and 15th January 2015
- Attended national conference on recent trends and innovations in microbial world at Smt. Chandibai Himathmal Mansukhani College, Ulhasnagar on 15th – 16th January 2015
- Attended international conference Bhaskara900 held at B. N. Bandodkar College of Science on 19th, 20th, 21st Sept. 2014
- Attended one day workshop on 'Writing the IMC RBNQA application report' on 18th june 2014
- Attended Two day executive workshop on 'Understanding the IMC Ramkrishna Bajaja National Quality Award criteria for performance excellence' on 28th and 29th April 2014
- Rising above and beyond excellence held on 14th, 15th and 29th June 2013, in Vidya Prasarak Mandal's, Thane Group of institutions.
- Organized and participated in one day seminar on unveiling life beyond DNA discovery on 13 July 2013, B. N. Bandodkar College of Science.
- Attended state level one day workshop on "the role of IQAC in quality enhancement" held on 5th October 2013 at B. N. Bnadodkar college of science

- Preparatory workshop of National Conference on Biodiversity: status and challenges in conservation. FAVEO 2013 at B. N. Bandodkar college of science, thane on
- National Conference on Biodiversity: status and challenges in conservation. FAVEO 2013 at B. N. Bandodkar college of science, thane on 29th and 30th November 2013
- Participated in The Sajjan Gupta –Konark Memorial Award 2013 one day research meet in life science, biotechnology, environmental microbiology and phytochemicals at S. I. E. S. college of Arts, Commerce and Science, Sion, Mumbai on 23rd December 2013
- Two Day national seminar on Challenges and opportunities in research and research funding in colleges Held at Smt. Chandibai Himathmal Mansukhani college, Ulhas nagar, on 17th and 18th January 2014.
- A Half Day Interaction Meeting on ‘Scientific Temper and Spirit of Inquiry’ held at Dr. V. N. Bedekar Institute of Management Studies(DR VN BRIMS) on Friday, 14th March, 2014

PUBLICATIONS/PRESENTATIONS:

- Jayashree, P., **Kalpita, M.**, Judith, T., & Ashwin, K. Micro RNAs: The Tiny Black Box in Diagnostics! J-BNB : A Multidisciplinary Journal, ISSN : 2454-2776, Volume 13, 2025, 79-88
- 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)
- Book chapter on ‘Bio-engineered gut microbiota for drug delivery: Novel propitious realm’ (publisher: Taylor and Francis) submitted to the editor, Dr. Rashid Gowher, Amity University. Acceptance awaited.
- 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.
- **Mulye, K.** and Pawar, J. (2021). Antimicrobial activity of *Punica granatum*. JBNB, 11:104-115.
- **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.
- **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.
- **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.
- **Mulye, K.,** Pawar, J., Chhatre, A., Bagul, A. (2015). Efficacy analysis of vermicomposting for microbiological waste treatment. Bionano Frontier, 8 (2).

- **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.
- 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.
- **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.
- Pawar, J., **Mulye, K.,** Bagul, A., Chhatre, A. (2015). Isolation and Identification of LDPE Degrading Organisms from Domestic Sludge Samples. JBNB, 3: 132-136.
- Talker, E., Talker, J., Thorat, V., Pawar, J., **Mulye K.** (2015). Formulation and efficacy of hand sanitizer. JBNB, 3: 137 – 141.
- **K. Mulye,** S. Tawde, P. Shringare, R. Deshmukh; Medicinal herbs: Potential Anti-HIV agents? Journal of Ayurveda 2007; Vol. 1 (No. 1) Jan-Mar 2007: 57-59.
- T. Khan, P. Tatke, S. Gabhe, **K. Mahajan,** S. Tawde, S. Kothari, R. Deshmukh: Screening of methanol and water extracts of *Acacia nilotica* pods for *in vitro* anti HIV activity, The Journal of research and education in Indian Medicine (An International Quarterly) July – sept, 2007, vol XIII:3, 47-53
- **K. Mulye,** S. Tawde, P. Shringare, R. Karttikeya, R. Deshmukh: *In-vitro* study of five medicinal plants as probable anti HIV agents at 5th International Conference on AIDS INDIA conducted in October'2005
- S. Tawde, **K. Mulye,** P. Shringare, R. Deshmukh: *In-Vitro* Study Of CD8+ T cell response induced by gp-120 fragment (a.a –254-274)” at 5th International Conference on AIDS INDIA conducted in October'2005.
- S. Tawde, **K. Mulye,** P. Shringare, R. Deshmukh: Study of Proliferative responses to cell wall and spheroplast of *Candida albicans* in HIV seropositive and normal individuals; at the 13th annual research Poster presentation competition held in Mumbai in February 2005 conducted by Dr. Dhala's Felicitation Fund and won the “Best Poster” presentation award in the M.Sc. Category.
- **K. Mulye,** S. Tawde, P. Shringare, R. Deshmukh, Comparative study of four medicinal plants for its anti-HBV activity, at International Conference for Emerging Viral Infection conducted by National Institute of Virology, Pune in October'2004.

- S. Kothari, **K. Mahajan**, S. Saptanekar, R. Deshmukh, Presented a poster entitled Common medicinal plants : potential antivirals? XXVII national conference of Indian Association of Medical Microbiologist, 5th - 9th Nov 2003 Mumbai.
- S. Kothari, **K. Mahajan**, P. Recordon – pinson, H. Fleury, R. Deshmukh Development of an alternative method of viral load estimation in HIV : A preliminary study, In the proceedings of the XXIX Annual congress of Indian association of medical microbiologist, Chennai, 21-23rd Oct 2005
- T. Khan, P. Tatke, S. Gabhe, **K. Mahajan**, S. Kothari, R. Deshmukh: *In vitro* evaluation of *Acacia nilotica* pods for anti-HIV activity, In the proceedings of pharmaceutical Sciences world conference, FIP, Cairo, 3rd – 8th Sept. 2005,
- S. Jondhale, P. Shringare, **K. Mahajan**, R. Dahake, J. Likhitar, A. Tilgote, P. Dahake, R. Deshmukh, An experience with HIV – SJ : A novel ayurvedic preparation for treatment of HIV/ AIDS: in the Proceedings of the National symposium on recent immunological advancements in HIV and opportunistic infections, Annamalai University, Chidambaram, 24th – 25th March 2007
- Presented at the Half Day Interaction Meeting on ‘Scientific Temper and Spirit of Inquiry’ held at Dr. V. N. Bedekar Institute of Management Studies (DR VN BRIMS) on Friday, 14th March, 2014.

Patent:

- application number 202021027566 with title METHOD OF STAINING PROTEINS IN NATIVE POLYACRYLAMIDE GEL USING BETALAINS IN BEETROOT EXTRACT has been published at the IPO on 21st January 2022 on the names of Dr. Jayashree Pawar, Dr. Kalpita Mulye and Ms. Zahera Momin

AWARDS AND RECOGNITIONS:

- Recipient of “ **Vishesh Margdarshak Purskar**” by Marathi Vidnyan Parishad in April 2019 for guiding project that received **Sharad Naik Vidnyaan Sanshodhan puraskar**
- **Submitted 16 microbial 16S rRNA gene sequences of probable novel bacteria in the international ENA (European Nucleotide Archive) database**
- Co-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).

- Co-guided a research project “Milk Testing Kit at Your Doorstep” presented by students at the Final Round of 16th 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’
- Guided a research project “Urban Spirulina Terrace: A Potential Remedy for Nutritional and Financial Gap Healing” presented by students at the Final Round of 15th 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’
- Co guided winning research project titled “Novel and eco-friendly staining method for proteins separated by Polyacrylamide gel electrophoresis’ in January 2019 at Marathi Vidnyaan Parishad
- 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**
- 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”, 29th International young scientist fest and contest held at Copenhagen, Denmark on 22nd to 26th April 2017 and won Gold medal in International Category
- Guided a research project “Biodegradation of LDPE plastic” presented by students at “Unge Forskere”, 28th young scientist fair and contest held at Copenhagen, Denmark during 22nd to 26th 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 to chair a session at national conference “Ecopulse: monitoring beats of ecosystem” held in February 2025

Recent research endeavor :

- Have contributed in content generation in Video on official YouTube channel, website and social media forums of Bentham Science Publishers:
<https://youtu.be/vWgtngD4Zgc?si=M3Nkk6oD434zKp84>

INVITED TALKS:

- Invited as judge at literature Survey Component presentations at Sophia College, Mumbai, June 23
- Invited as mentor speaker at DES-INSPIRE internship Camp 2023 At DUBSSC, Dapoli, Ratnagiri February 23
- Delivered a lecture on 'Microbial taxonomy: Basic and advances' during the lecture series organized s apart of the national conference on 'New and emerging trends in Bioinformatics and Taxonomy, NETBT 2015 held at B. N. Bandodkar college of science on 9th January 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.

TRAININGS AND CONSULTANCIES OFFERED:

- Actively involved in providing consultancy to 'Waste Encare Pvt. Ltd.', an ISO 9001-2008 company, on 6th July 2012, regarding various tests for assessment of water potability. Guidance provided to the technical staff regarding details of microbiological media and test reagents.
- Actively involved in providing consultancy to Dr. A. Chavan, regarding set-up of Microbiology laboratory.
- Actively involved in organization of course 'Training in Basic Biotechnology & Microbiology techniques' for staff and students of Babasaheb Ambedkar Technological University, Lonere, Raigad, during Dec2012, Dec2013 and Dec 2014.
- Actively involved in providing consultancy regarding antimicrobial testing of chemicals to M.Sc. students of Dyanasadhana College, Thane.
- Provided on request training to the faculty of Department of Biotechnology, Momin College, Bhiwandi, Thane for Expertship of T. Y. Biotechnology Practical Examination.
- Actively involved in providing consultancy regarding soil analysis and enzyme assays

EXTRACURRICULAR ACTIVITIES

- Participated and won title 'Mrs. Annapoorna' at the television show on ETV Marathi.
- Presentation on HIV for students of polytechnic college, on 1st Dec 2005
- Invited as a guest speaker by NSS unit of Joshi Bedekar College, in 2006 to deliver a lecture on AIDS Awareness.
- Special Recognition for contribution towards club service (Rotary Club of Thane Suburban)
- Worked as Co-Editor for the club magazine 'Suburban Pot Pourri' the monthly magazine of Rotary Club of Thane Suburban, for the year 2008 -2009.

- Invited by Rotary Club of Thane Suburban, in 2014 to deliver a talk on Wonder culture.
- Actively involved in institutional committees and clubs like IQAC, admission, journal and movie club, Gymkhana
- Has been in core committee for writing Application for the IMC Ramkrishna Bajaj National Quality Award.

REFERENCE

Dr. (Mrs.) R. A Deshmukh, MD, Ph.D,
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