Dr. Pratik Prashant Pawar

Bio process Technology | Product Management | Analytical & Chromatography Systems
Ph.D. (Tech.) & M.Tech. Bioprocess Technology, B.E. Biotechnology
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Professional Synopsis

Adaptable technologist and results-driven Scientific Product Manager with expertise in bioprocessing, integrated fermentation, analytical instrumentation, and chromatography systems. Proven experience leading cross-functional teams, managing software testing workflows, and supporting product lifecycle management. Skilled in system validation, and cross-platform integration for chromatography data systems. Demonstrated ability to drive innovation, technical documentation, and collaborative research initiatives resulting in patents, conference presentations, and peer-reviewed publications.

Professional Experience and Key Responsibilities

Waters Corporation, India **October 2023- Present**
Waters Global Capability Centre, Bengaluru **Lead Product Manager (Evaluation)**

- Leading a cross-functional team of manual, automation testers and developers to enable support the innovative Waters LC system portfolio with cross-lab compliant chromatography data system (CDS) like Sciex (SCIEX OS and Analyst) & ThermoFisher Scientific (Chromeleon/Xcalibur)
- Defining Testing Methodologies, Designing Test Plans and Test Cases, Verifying and Validating applications and Documentation based on standards for Software Development.
- Identify and track defects, generate bug reports and submit test report .Tools used (Atlassian JIRA, Confluence)
- Responsible for planning, forecasting and resource utilization using Microsoft Project Plan (MPP)
- Managing and executing the SDLC through Agile (Scrum) methodology

Infosys Ltd. (Sr. Consultant & Evaluation Lead at Waters GCC) **October 2023- February 2026**

- Led evaluation team supporting validation of chromatography applications across third party environments.
- Received Best Evaluation Lead Award from Infosys Ltd. for working on this Waters project at GCC.

School of Biotechnology and Bioinformatics **February 2022- October 2023**
D Y Patil Deemed to be University, Navi Mumbai **Assistant Professor**

- Teaching & mentoring post-graduate students for subjects related to Bio-processing, Bio-separation, Analytical techniques, Enzyme technology, Unit operations & Research Methodology
- In-charge of the Central Instrumentation facility : Laboratory & safety management in an analytical laboratory
- Co-incharge of the syllabus revision committee for B. Tech. Biotechnology as per National Education Policy.

Independent Consultant (Remote) for Biomedican Inc. US **November 2021- February 2022**

- Planning, advising and troubleshooting yeast-based processes for value-added metabolite production.

Hindustan Petroleum Corporation Limited **March 2021- September 2021**
Bio processing Group, H.P. Green R&D centre, Bengaluru **Post-Doctoral Research Associate**

- Planning and conducting research projects on application of Bioprocesses to the refinery processes/development of bio-catalysts/bio-fuels.
- Led Project assistants in scaling process to pilot plant.

DBT-ICT Centre for Energy Bio sciences, **May 2016- March 2021**
Institute of Chemical Technology, Mumbai-19 **Senior Research Fellow**

- Worked on adsorptive downstream processing for separation & purification of lipids and other metabolites from fermentation broth. Developed a scalable process for the production of edible grade microbial oil.

- Devised strategies for *in-situ* product recovery / integrated fragmentation for bio-transformation based processes.
- Filed two International Patent Applications and published research articles based on the developed process.
- Received CSIR-International Travel Award for presenting the research work at European Molecular Biology Laboratory, EMBL, Heidelberg, Germany
- Responsible for drafting patent applications, research proposals, carrying prior-art searches, freedom-to-operate analyses, responding reviewers and examiners.
- Reviewer for Peer-Reviewed journal: *Biotechnology for Biofuels, Engineering Reports John Wiley & Sons*

Advanced Enzyme Technologies Ltd., India **July 2014- September 2015**
Enzyme Application Development Laboratory **Research Associate**

- Worked on enzymatic processing of different crude oil substrates for biodiesel production and food applications.
- Demonstrated pre-pilot trials using in-house immobilized enzymes.
- Developed analytical methods on GC-FID Cool-on-column and HPLC-ELSD for qualitative and quantitative analysis of the biofuel for its compliance with the international standards (ASTM and European Standards).

Research Outcomes

International Patent Applications

1. (WO2018/193468) EXTRACTIVE PRODUCTION OF HYDROPHOBIC METABOLITES USING OLEAGINOUS MICROBES

   Inventors: Lali Arvind Mallinath; Odaneth Annamma Anil; **Pawar Pratik Prashant**; Warke Mrunal Anil; Vadgama Rajeshkumar Natwarlal; Chourasia Vallari Ramesh.

2. (WO2019/026090) A METHOD FOR PRODUCING MICROBIAL OIL FROM LIGNIN OR LIGNIN HYDROLYSATE USING OLEAGINOUS YEASTS

   Inventors: Odaneth Annamma Anil; Lali Arvind Mallinath; Chourasia Vallari Ramesh; **Pawar Pratik Prashant**; Vadgama Rajeshkumar Natwarlal

Publications

1. **Pawar P P**, Odaneth A A, Vadgama R N, Lali, A M. Simulataneous lipid biosynthesis and recovery for oleaginous yeast- *Yarrowia lipolytica*. *Biotechnology for Biofuels.* 2019; DOI: https://doi.org/10.1186/s13068-019-1576-7
2. **Pratik P. Pawar**, Rajeshkumar N. Vadgama, Arvind M. Lali & Annamma A. Odaneth. Extractive production of microbial oil using non-ionic solid-phase adsorbents: A comparative study. *Engineering Reports*. 2020. DOI: https://doi.org/10.1002/eng2.12146
3. Divyata Vilas Rane, **Pratik Prashant Pawar**, Annamma Anil Odaneth, & Arvind Mallinath Lali. Microbial oil production by the oleaginous red yeast, *Rhodotorula glutinis* NCIM 3168, using corncob hydrolysate. *Biomass Conversion and Biorefinery.* 2021 https://doi.org/10.1007/s13399-021-01298-z (Impact Factor-2.602)
4. Gupte, Arpita, Anuja Kulkarni, **Pratik Pawar**, Smita Jadhav, and Anjali Kembhavi. "Agro-Food Waste, a Potential Bioresource for Nutraceuticals." In Nutraceuticals Inspiring the Contemporary Therapy for Lifestyle Diseases, pp. 205-210. CRC Press. https://www.taylorfrancis.com/chapters/edit/10.1201/9781003392934-17/agro-food-waste-potential-bioresource-nutraceuticals-arpita-gupte-anuja-kulkarni-pratik-pawar-smita-jadhav-anjali-kembhavi
5. Warke M A, **Pawar P P**, Kothari S D, Odaneth A A, Lali A M. Two Stage Approach for Microbial Oil Production using *Yarrowia lipolytica* NCIM 3590. *Adv Biotech & Micro*. 2017; 5(1): 555652. DOI: 10.19080/AIBM.2017.05.555652 (Impact Factor-1.023)

Technical skills:

Expertise in fermentation, biotransformation and bio-catalysis using microbial whole cells and enzymes. Skilled at developing adsorption based separation and purification strategies. Expertise in operation of lab scale bioreactors and well versed with process and reactor designing.

Analytical Techniques: Proficiency in profiling, analysis & characterization with state-of art analytical procedures.

Chromatographic Techniques-

HPLC (Waters UPLC, Agilent 1200/1260 & Shimadzu LC 2010 equipped with ELSD, UV, DAD & RI detectors.)

GC (Agilent 7820A/7890A equipped with Innowax and Cool-on Column and FID,

Mass Spectrometry using QQQ and Q-TOF mass analyser; **FT-IR** spectroscopy; **UV-Vis** Spectrophotometry; **Karl Fischer Titration** for Moisture Analysis; Enzyme Activity Assays using Auto-titrator (pH-stat).

Computer Knowledge: MS Office, Basics of C/ C++, AutoCAD, MATLAB; Molecular Docking & virtual screening softwares: Schrodinger, iGEMDOCK, Hex6.1

Educational Credentials

Ph.D. (Tech.) in Bioprocess Technology May, 2016 – March 2021
Institute of Chemical Technology, Mumbai.

M. Tech. (Bioprocess Technology) July, 2012 –June, 2014
Institute of Chemical Technology, Mumbai. CGPA-7.88

Bachelor of Engineering (Biotechnology) June, 2008- June, 2012
University of Mumbai. Percentage- 63.87%

Additional Qualifications

Qualified Graduate Aptitude Test in Engineering (GATE BT) for the years 2012, 2014 and 2016.
Received CSIR-HRD Foreign Travel Grant for the year 2018

Extra-Curricular Accolades

2025: Received stellar performance award for the Quarter July-Sept 2024 (Q3) at WATERS GCC

2024: Received INSTA AWARD from Infosys Ltd. for exceptional work as an Evaluation Lead

2024: Completed courses on Quality and Computer System Validation- Life-sciences by Infosys

2023: Completed a faculty development programme on "**Artificial Intelligence & Data Science: Perspectives, Pedagogy and Practices**", jointly organised by All India Council for Technical Education (AICTE) and Jio Institute

2022: Received Loreal prize for innovation in industrial biotechnology segment at the NBEC, 2021 organised by the Centre for Cellular and Molecular Platforms (CCAMP), Bangalore under joint inititative with BIRAC, Dept. of Biotechnology, Govt. of India

2021: Completed a training course, "**MATLAB for Data processing and Visualization**," organized by MathWorks® | Training services

2020: Completed a training course, "**MATLAB Onramp**," organized by MathWorks® | Training services,

2018: Presented a poster and flash presentation at "**EMBO Workshop: Experimental Approaches to Evolution and Ecology Using Yeast and Other Model Systems**" held at EMBL, Heidelberg, Germany, during 17th October 2018 to 20th October 2018.

2018: Presented a poster on "**Strategies for production of Microbial oil using oleaginous yeast**" in 10th Yeast Biology Conference held at Jawaharlal Nehru University, New Delhi during 8th – 11th February, 2018.

2017: Attended **Advance Mass Spectrometry Course** held in November 2017, organised by Centre for Cellular and Molecular Platforms (CCAMP), NCBS Bangalore.

2016: Presented a poster on **“HIGH CELL DENSITY CULTIVATION OF NON CONVENTIONAL YEAST"** at International conference on **"Sustainable Utilization of Tropical Plant Biomass: Bioproducts, Biocatalysts and Biorefinery (SutB^4)”** held on 17 -18th November -2016

2015: Attended workshop on **Ultra Performance Liquid Chromatography** by **Waters Inc**.

2014: Attended workshop on “**Good Laboratory Practices**” organized by Advanced Enzymes. 2015: Organized workshop on “IPR in Biotechnology” at Advanced Enzymes Tech. Ltd.

2013: Attended **‘Chemcon-2013’** held at ICT Mumbai & **‘Bioprocessing India 2013’** held at IIT Delhi, India.

Personal Details

Date of Birth: 17th September 1990
Nationality: Indian
Marital Status: Married
Languages Known: English, Marathi, Hindi