

Dr Ujjval B Trivedi
Professor in Microbiology
Department of Biosciences
Sardar Patel University
Vallabh Vidyanagar

I am working in the Department of Biosciences since December 1994.
I am involved in teaching M Sc Microbiology and Biotechnology and Industrially Biotechnology.

Education (Post graduation onwards)

M Sc Ph D in Microbiology

Passed **UGC-CSIR (NET)** in 1989.

Successfully completed [S* Online Course](#) on **BIOINFORMATICS** with A+ grade in August 2004.

Teaching Areas:

- 1) Enzymology
- 2) Fermentation Technology

Research Areas:

1. Microbial Production Enzymes
2. Biopolymers

Research Publications in peer reviewed journals: 40

Ph D students:

Completed	10
Ongoing:	2

Funded Projects: 3

Member:

- 1) Chairman, Board of Studies in Biosciences
- 2) Faculty of Science
- 3) Youth festival committee
- 4) University Syndicate (April 2012-March 2015)
- 5) Teacher Incharge for Students activities and Youth festival

Activities:

- 1) Campus development and biodiversity studies of birds, butterflies, spiders, other insects and reptiles in Biosciences campus and Botanical Garden
- 2) Associated with university NET coaching center and other colleges of SPU for competitive exams

- 3) Soft skill training programs
- 4) Popular article writing in university magazines

List of Publications:

1. **Ujval Trivedi**, Hemant Patel and Ramesh Ray "Studies on lipid profile of different yeasts for the production of Single Cell Oil", by, in 'Fungi and Biotechnology' (Recent Advances), Ed. H C Dube, Today & Tomorrow Publishers, 1991.
2. Hemant Patel, **Ujval Trivedi** & Ramesh Ray "Effect of carbon, nitrogen sources and divalent cations on the lipid yield and fatty acid profile in *Rhodotorula minuta*" by in 'Industrial Biotechnology' Ed. Vedpal S Malik and Padma Sridhar, Oxford and IBH Publishing Co. Pvt. Ltd, 1992.
3. N.S. Thakor, M. A. Patel, **U. B. Trivedi** and K. C. Patel "Production of PHB (Poly β hydroxybutyrate) by *Comamonas testosteroni* during growth on naphthalene", **2003** World Journal of Microbiology and Biotechnology, 19 (2), 185-189.
4. N.S. Thakor, **U.B.Trivedi** and K.C.Patel, "Biosynthesis of medium chain length Poly (3-hydroxyalkanoates) (mcl-PHAs) by *Comamonas testosteroni* during cultivation on vegetable oils" **2005**, Bioresource Technology, 96, 1843-1850.
5. Nehal Thakor, **Ujval Trivedi** and K.C.Patel, "A Review: Microbiology and Biotechnological aspects of biodegradable plastics: Poly (hydroxyalkanoates)", **2006**, Indian Journal of Biotechnology, 5,137-147.
6. Badrish Soni, Beena Kalavadia, **Ujval Trivedi**, Datta Madamwar, "Extraction, purification and characterization of phycocyanin from *Oscillatoria quadripunctulata* isolated from the rocky shores of Bet-Dwarka, Gujarat, India", Process Biochemistry 41 (**2006**) 2017–2023
7. Hema Anto, **U.B. Trivedi**, K.C. Patel "Glucoamylase production by solid state fermentation using rice flake manufacturing waste products as substrate.", **2006** Bioresource Technology,97,1161-1166.
8. Hema Anto, **Ujval Trivedi** and K.C.Patel, "Alpha Amylase production by *Bacillus cereus* MTCC 1305 using solid state fermentation",**2006**, Food Technology and Biotechnology,44(2).
9. Hilor Pathak, Umang Bharucha, **Ujval Trivedi** and K.C.Patel, "Siderophore production and Polyaromatic hydrocarbon utilization by bacterial isolates from a petroleum contaminated soil",**2006**, Indian Journal of Microbiology,46(3),243-247.
10. Kishor Chauhan, **Ujval Trivedi** and K.C.Patel, "Application of response surface methodology for optimization of lactic acid production using date juice", **2006**, Journal of Microbiology and Biotechnology,16 (9),1410-1415.
11. Kishor Chauhan, **Ujval Trivedi** and Kamlesh C. Patel, "Statistical screening of medium components by Plackett-Burman design for lactic acid production by *Lactobacillus* sp. KCP01 using date juice",**2007**,Bioresource Technology, 98, 98-103.
12. K C Patel, M A Patel, Kishor Chauhan, Hema Anto and **Ujval Trivedi**, "Production of an antioxidant naphthoquinone pigment by *Comomonas*

- testosterone* during growth on Naphthalene”, **2007** Journal of Scientific and Industrial Research, 66, 605-610
13. Badrish Soni, **Ujjval Trivedi**, Datta Madamwar: “A novel method of single step hydrophobic interaction chromatography for the purification of phycocyanin from *Phormidium fragile* and its characterization for antioxidant property”, Bioresource Technology 99 (**2008**) 188–194.
 14. Rachana Bhatt, Dishma Shah, K.C. Patel, **Ujjval Trivedi**, PHA–rubber blends: Synthesis, characterization and biodegradation, Bioresource Technology, 99, 4615-4620 (**2008**)
 15. Bhatt R., Panchal B., Patel K. C., Sinha V. K. and **Trivedi U.** Synthesis, characterization and biodegradation of CMCH -g- Mcl-PHA. Journal of Applied Polymer Science 110: 975 – 982. (**2008**)
 16. Rachana Bhatt, K.C. Patel and **Ujjval Trivedi** "Purification and Properties of Extracellular Poly (3-hydroxybutyrate) Depolymerase Produced by *Aspergillus fumigatus* 202". **2010** Journal of Polymers and the Environment, 18,141-147.
 17. Deval Patel, Rachana Bhatt, Hiral Patel, Kamlesh Patel and **Ujjval Trivedi**, “Hydroxyethylmethacrylate-graft-Carboxymethylchitosan-graft-PHA (HEMA-g-CMCH-g-PHA): Synthesis, Characterization and Biodegradation”. **2010** , Prajna- Journal of pure and applied sciences, 18,44-49.
 18. **Sushma Deepthi aril, U.B.Trivedi and K.C.Patel**, (2010) Curdlan like exopolysaccharide production by *Cellulomonas flavigena* UNP3 during growth on hydrocarbon substrate, *World Journal of Microbiology and Biotechnology*, 27, 1415-1422.
 19. Rachana Bhatt, Kamlesh Patel and **Ujjval Trivedi** Chapter entitled "Biodegradation of Polyhydroxyalkanoates". in *A Handbook of Applied Biopolymer Technology: Synthesis, Degradation and Applications*, 2011, 311-331, DOI:10.1039/9781849733458-00311, **Royal Society of Chemistry Publishing, 2011**
 20. **Bharucha, U.D., Prajapati, V.S., Patel, K.C. and Trivedi, U. B.**, (2011). Catecholate Type of Siderophore Production by Enterobacter Sp. UB4 Isolated from the Rhizospheric Soil of Alfaalfa Plant, *Journal of Cell and tissue Research*, 11, 2967-2971.
 21. **Vishal P.Oza, Pritesh P. Parmar, Priyanka I Patel, Riti Singh, Ujjval Trivedi and R.B.Subramanian** 2011 HOMOLGY MODELING OF PLANT L-ASPARAGINASE: CHARACTERIZATION OF ITS LIGAND BINDING EFFICIENCY Journal of Advanced Bioinformatics Applications and Research, 2 (01), 100-107.

22. **Vimal Prajapati, U. B. Trivedi and K. C. Patel**, (2013). Optimization of glucoamylase production by *Colletotrichum* sp. KCP1 using statistical methodology, *Food Sciences and Biotechnology*, 22(1), 31-38.
23. **Vimal S. Prajapati, Nidhi Soni, Ujjval B. Trivedi, Kamlesh C. Patel** An enhancement of red pigment production by submerged culture of *Monascus purpureus* MTCC 410 employing statistical methodology Biocatalysis and Agricultural Biotechnology 10.1016/j.bcab.2013.08.008
24. **Umang Bharucha • Kamlesh Patel •Ujjval B. Trivedi** Optimization of Indole Acetic Acid Production by *Pseudomonas putida* UB1 and its Effect as Plant Growth-Promoting Rhizobacteria on Mustard (*Brassica nigra*) September 2013, Volume 2, Issue 3, pp 215-221
25. Vimal S. Prajapati, Ujjval B. Trivedi, Kamlesh C. Patel Kinetic and Thermodynamic Characterization of Glucoamylase from *Colletotrichum* sp. KCP1 Indian Journal of Microbiology, March 2014, Volume 54, Issue 1, pp 87-93 2014 DOI DOI 10.1007/s12088-013-0413-0
26. Vimal S. Prajapati, Ujjval B. Trivedi, Kamlesh C. Patel A statistical approach for the production of thermostable and alklophilic alpha-amylase from *Bacillus amyloliquefaciens* KCP2 under solid-state fermentation. 3 Biotech (2015) 5:211–220. DOI 10.1007/s13205-014-0213-1
27. Vimal Prajapati • Ujjval Trivedi • Kamlesh C. Patel Bioethanol Production from the Raw Corn Starch and Food Waste Employing Simultaneous Saccharification and Fermentation Approach Waste Biomass Valor (2015) 6:191–200 DOI 10.1007/s12649-014-9338
28. Sanket Ray, Vimal Prajapati, Kamlesh Patel, Ujjval Trivedi :Optimization and characterization of PHA from isolate *Pannonibacter phragmitetus* ERC8 using glycerol waste, International Journal of Biological Macromolecules, 86, 741-9, (2016), DOI information: 10.1016/j.ijbiomac.2016.02.002
29. Kiransinh Rajput, K. Patel, and Ujjval B. Trivedi: Screening and selection of medium components for cyclodextrin glucanotransferase production by new alkaliphile *Microbacterium terrae* KNR 9 using Plackett-Burman design, Biotechnology Research International (2016)
30. Kiransinh N. Rajput Kamlesh C. Patel Ujjval B. Trivedi A novel cyclodextrin glucanotransferase from an alkaliphile *Microbacterium terrae* KNR 9: purification and properties, 3 Biotech 6:168, 2016
31. Kiransinh N. Rajput, Kamlesh C. Patel, and Ujjval B. Trivedi: β -Cyclodextrin Production by Cyclodextrin Glucanotransferase from an Alkaliphile *Microbacterium terrae* KNR 9 Using Different Starch Substrates, Biotechnology Research International, Volume 2016 (2016)
32. Vimalkumar S Prajapati, Sanket Ray, Jitendra Narayan, Chaitanya C Joshi, Kamlesh C Patel, Ujjval B Trivedi, RM Patel : Draft genome sequence of a thermostable, alkaliphilic α -amylase and protease producing *Bacillus amyloliquefaciens* strain KCP2, 3 Biotech, 7 (6), p372, 2017
33. Ajit M Patel, Vanita M Patel, Juhi Pandya, Ujjval B Trivedi, Kamlesh C Patel: Evaluation of Catalytic Efficiency of *Coriolopsis caperata* DN Laccase to Decolorize and Detoxify RBBR Dye, vol 2 (3), 85-98

34. Hiral M. Patel, Rajesh P. Rastogi, Ujjval Trivedi, Datta Madamwar: Structural characterization and antioxidant potential of phycocyanin from the cyanobacterium *Geitlerinema* sp. H8DM, *Algal Research*, Volume 32, June 2018, Pages 372-383
35. Hiral M. Patel, Rajesh P. Rastogi, Ujjval Trivedi, Datta Madamwar: Cyanobacterial diversity in mat sample obtained from hypersaline desert, Rann of Kachchh, *3 Biotech* (2019) 9:304 <https://doi.org/10.1007/s13205-019-1837-y>
36. Patel A., Patel V., Patel H., Trivedi U., Patel K. (2020) White Rot Fungi: Nature's Scavenger. In: Shah M. (eds) *Microbial Bioremediation & Biodegradation*. Springer, Singapore pp 267-307 ISBN 978-981-15-1811-9
37. Bhatt B.M., Trivedi U.B., Patel K.C. (2020) Extremophilic Amylases: Microbial Production and Applications. In: Arora N., Mishra J., Mishra V. (eds) *Microbial Enzymes: Roles and Applications in Industries*. Microorganisms for Sustainability, vol 11, pp 185-205. Springer, Singapore,
38. Bhumi Bhatt a, Vimal Prajapati b, Kamlesh Patel a, Ujjval Trivedi Kitchen waste for economical amylase production using *Bacillus amyloliquefaciens* KCP2, *Biocatalysis and Agricultural Biotechnology* 26 (2020) 101654
39. Harsh Patel a, Sanket Ray b, Ajit Patel c, Kamlesh Patel a, Ujjval Trivedi: Enhanced lipase production from organic solvent tolerant *Pseudomonas aeruginosa* UKHL1 and its application in oily waste-water treatment. *Biocatalysis and Agricultural Biotechnology* 28 (2020) <https://doi.org/10.1016/j.bcab.2020.101731>
40. Radhika K Patel, Ravi K Shah, Vimal S Prajapati, Kamlesh C Patel, Ujjval B Trivedi Draft Genome Analysis of *Acinetobacter indicus* Strain UBT1, an Efficient Lipase and Biosurfactant Producer, *Current Microbiology* 2021 Apr;78(4):1238-1244. doi: 10.1007/s00284-021-02380-5. Epub 2021
41. Sanket Ray, Dhruvi Amin, Naresh Butani, Ujjval Trivedi, and Kamlesh Patel Evaluation of Dynamic Microbiome Ecology Within the Plant Roots, in *Microbial Metatranscriptomics Belowground*, Editors Manoj Nath • Deepesh Bhatt • Prachi Bhargava • D. K. Choudhary, Springer ISBN 978-981-15-9757-2 ISBN 978-981-15-9758-9 (eBook) <https://doi.org/10.1007/978-981-15-9758-9>, 2021

List of Ph.D. students

1.	Rachana Bhatt	Microbial Production, Chemical Modifications and Biodegradation of Poly (3-Hydroxyalkanoates)	2003-2008	Awarded
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2.	Badrish Soni	Cynobacterial Phycobiliproteins: Production, Purification, Crystallization, Structure Determination and Applications	2003-2008	Awarded
3.	Kiransinh Rajput	Cyclodextrin glucanotransferase production from <i>Microbacterium terrae</i> KNR-9 and its application	2004-2009	Awarded
4.	Hardik Bhatt	Production, Purification and Applications of Lipase from Organic Solvent Tolerant <i>Pseudomonas aeruginosa</i> BH-5	2004-2012	Awarded
5	<u>Umang Bharucha</u>	Microbial Siderophores from Plant Growth Promoting Bacteria and its possible applications	2004- 2013	Awarded
6	<u>Deval Patel</u>	Microbial Production of Biopolymers and its Application	2009-2016	Awarded
7	<u>Sanket Ray</u>	Microbial Production and Characterization of Polyhydroxyalkanoates (PHAs) from Agroindustrial Wastes and Its Biodegradation	11th October, 2011	Awarded
8	<u>Bhatt Bhumi M</u>	Microbial production of amylases	20/10/2014	Registered
9	<u>Harsh Patel</u>	Microbial Amylases	11/03/2015	Awarded

10	<u>Radhika Patel</u>	Microbial Lipases	Jan 2022	Awarded
11	<u>Hiral Patel</u>	Cynobacterial Proteins	02/06/2021	Awarded
12	<u>Himanshu Mali</u>	Organophosphate hydrolase	21/03/2017	Registered

Funded Research Projects:

Sr. No.	Title of the project	Funding Agency	Tenure of the project	Amount Sanctioned (Rs.)
1	UGC Major Research Project (Principal Investigatr)	Production and Degradation of Biosynthetic and Semibiosynthetic Polyhydroxyalkanoates	April, 2007	March, 2010 Rs. 9,85,100
2	Microbial synthesis and Purification of chiral hydroxyalkanoic acid	Council of Scientific and Industrial Research	February, 2011 to 2014	17,41,300/-
3	Utilization of agroindustrial and other wastes for production of polyhydroxyalkanoates (PHA) and biodegradation of these PHAs	University Grants Commission	July, 2011 to 2014	7,73,800/-