



**Dr. D.Y. Patil Vidyapeeth's**  
**Dr. D. Y. Patil Biotechnology & Bioinformatics Institute**  
Mumbai-Bangalore Express High way, Tathawade, Pune 411 033  
**Mail:** info.biotech@dpu.edu.in, **Website:** <http://biotech.dpu.edu.in>

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**Designation:** Associate professor,  
Dr. D.Y. Patil Biotechnology & Bioinformatics Institute,  
Dr. D.Y. Patil Vidyapeeth, Pune

**Email ID:** manjusha.dake@dpu.edu.in

**Phone Number:** 020-67919457

**EDUCATIONAL QUALIFICATIONS:**

Ph.D. in Biochemistry (2004) –Shivaji University

M.Sc. in Biochemistry (1995) – Shivaji University (Santiniketan)- **First class**

B.Sc. (Hons.) in Biochemistry (1993) – Yashwantrao Chavan Institute of Science College  
(Santiniketan)- **First class, with Distinction**

**EMPLOYMENT EXPERIENCE:**

**Research Fellow**, Department of Biochemistry, Shivaji University, Kolhapur (1996-2000)

**Lab Assistant**, Department of Biochemistry, Shivaji University, Kolhapur (1999-2000).

3. Technician, Quality Control Department, OKAS Pharmaceuticals, Satara. (2002-2003)

**FIELD OF SPECIALIZATION:** Biochemistry/Enzymology

**Specific Areas of Research Interest:**

1. Purification and biochemical characterization of proteases and their applications in industry, waste management, and medicines.
2. Screening of plant protease inhibitors to find out their antimicrobial, antioxidant and anticancer potential.
3. Purification and biochemical characterization of tyrosinase inhibitors and their applications in phenol bioremediation.
4. Purification and biochemical characterization of tyrosinase inhibitors and their applications in neurological diseases.
5. Screening of marine actinomycetes for promising enzyme activities and their antimicrobial and anticancer potential.

### **Fellowships:**

1. Departmental Research Fellowship Scheme during Ph.D. course at Shivaji University, Kolhapur (1996-1999).

### **ACADEMIC ACTIVITIES:**

#### **Teaching & Research Experience:**

1. **Lecturer**, Vidya Pratishthan's School of Biotechnology, Vidyanagari, Baramati, Pune-413133 (1 yr.)
2. **Lecturer**, Dr. D. Y. Patil Biotechnology and Bioinformatics Institute, Tathawade, Pune-411033 (3 yrs.)
3. **Assistant Professor**, Dr. D. Y. Patil Biotechnology and Bioinformatics Institute, Tathawade, Pune-411033 (12 yrs.)
4. **Associate Professor**, Dr. D. Y. Patil Biotechnology and Bioinformatics Institute, Tathawade, Pune-411033 (9 months)
5. **Recognized Ph.D. Research Guide** in Biotechnology at Dr. D.Y Patil Vidyapeeth, Pune (10 years)
6. **Paper-setter and/or Examiner (B.Sc., B.E. in Biotechnology Engineering, M. Tech. in Bio-Chemical Engineering)** for graduate and postgraduate courses of Kolhapur Institute of Technology's College of Engineering and graduate courses of Rajiv Gandhi Institute of IT and Biotechnology, Bharati Vidyapeeth Deemed University, Pune,

**No. of Ph.D., Postdoctoral, M.Phil. /M.Sc. students Guided:**

1. Ph. D.: 1+2 (in process)
2. Postdoctoral : NIL
3. B.Tech Biotechnology (Project) : 17
4. B.Tech Medical Biotechnology (Project): 1
5. M.Sc Biotechnology (Project): **15** + 1 (Other College)
6. M. Tech (Int.) Biotechnology: **1**

**No. of Funded Research Projects Completed and in Hand:**

Sr.	Funding Agency	Duration
1	DPU	2008-2010
2	DPU	2012-2014
3	DPU	2015-2018
4	DPU	2017-2020

**Anonymous Reviewer:**

**A. International Journals:**

1. African Journal of Biotechnology
2. Journal of Microbial & Biochemical Technology
3. Journal of Agricultural Biotechnology & Sustainable Development
4. African Journal of Biotechnology

**Participation in Research Advisory/Academic Committees:**

1. **Ex-Chairman, Examination Committee** in Biotechnology and Bioinformatics, Dr. D.Y. Patil Vidyapeeth (2016-2020)
1. **Ex-Chairman, Anti Ragging Committee** in Biotechnology and Bioinformatics, Dr. D.Y. Patil Vidyapeeth (2016-2020)
2. **Ex-Member, Academic Council**, Dr. D.Y. Patil Vidyapeeth (2010-2013)
3. **Observer, State Eligibility Test (SET) (Maharashtra)** (2017)
4. **Assistant Director of Assessment Programme (CAP)** For Biotechnology & Bioinformatics Examinations (2017-2018)

5. Centre Observer for Vidyapeeth Examinations (MBA) (2013, 2019)

**RESEARCH PAPERS IN PEER REVIEWED JOURNALS:**

21. Ashwini N Puntambekar, Manjusha Dake\* (2017) Protease inhibitor from white cranberry beans (*Phaeolus vulgaris*): Isolation, purification and characterization, International Journal of Pharmacy and Pharmaceutical Sciences, Vol 9 (9), 190-198, 2017.
20. Ashwini N Puntambekar, Manjusha Dake\* (2017) Isolation, Purification and optimization of thermophilic and alkalophilic protease originating from hot water spring bacteria, Asian Journal of Pharmaceutical and Clinical research, Vol 10 (9), 284-291, 2017.
19. M.S. Dake and N.B. Patil (2016) Effect of ethanol on three pools of glycogen in top flocculating strain of *Saccharomyces cerevisiae*-3441, Asian Journal of Microbiology, Biotechnology and Environmental Sciences, Vol 8(1), 227-232.
18. Manjusha Dake and Khushbu Gupta (2016) Isolation of  $\beta$ -galactosidase from a yeast sp. isolated from whey, International Journal of Advanced Biotechnology and Research, Vol 6(3): 425-32.
17. M.S. Dake and N. Beniwal (2014) Antibacterial activity of *Aureobasidium pullulans*, International Journal of Pharma and Bio Sciences, Vol 5(3), (B) 1026-1048, 2014.
16. Garima Singh, Manjusha Dake(2012) Identification of carbohydrate components in *Zymomonas mobilis strain* (2427) during ethanol production at various concentration of sucrose, The Global Journal of Pharmaceutical Research, Vol. 1 (5), pp. 1370-1378, 2012.

15. Manjusha Dake and Rajyalakshmi Kasaram (2012) Production and partial characterization of  $\beta$ -Glucanase from *Galactomyces* sp. Isolated from whey, *Elixir Bio Tech.*, Vol. 53, pp. 11932-11936.
16. Manjusha Dake and Sudha Amarapurkar (2012) Role of ethanol and calcium towards the level of glycogen and surface  $\alpha$ -glucans as a measure of flocculation in *Saccharomycesitalicus*, *Elixir Bio Tech.*, Vol. 48 , pp. 9572-9575.
13. MS Dake, AN Puntambekar, SV Amarapurkar (2012) Induction of  $\beta$ -Glucanase from whey yeast, *International Journal of Pharmacy and Biological Sciences*, Vol.2(2),pp.263-268.
12. M.S. Dake and Gautam Kumar (2012) Partial purification and characterization of fructosyl transferase from *Aureobasidium pullulans*, *International journal of Science, environment and Technology*, Vol.1(2), pp.88-98, 2012.
11. Dr. SV Amarapurkar, Dr. Manjusha Dake (2011) Studies on enzymatic activity of micro-organisms symbiotically associated with orchid roots (*Dendrobium noble*) Orchid-Microbe interactions, *International Journal of Science and Advanced Technology*, Vol.1(4), pp. 117-125.
10. MS Dake, JP Jadhav, NB Patil (2011) Effect of variable sugar concentrations on glycogen and ethanol content in *Saccharomyces* sp., *International Journal of food engineering*, Vol. 7(5), pp. 1-10.
9. Dake MS, Tarawade SV and Patel HB (2011) Studies on Lipid Profiles of *Saccharomyces* sp and Effect of Physicochemical Agents on Flocculation. *International Journal of Advances in Science & Technology*. 2(1): 32-42.

8. Dake MS, Khetmalas MB and Amarapurkar SV (2011) Role of insoluble glycogen in ethanol adaptation mechanism of *Saccharomyces italicus*. Indian Journal of Science and Technology. 4(1): 52-55.
7. Dake MS, Jadhav JP, Patil NB (2010) Variations of two pools of glycogen and carbohydrate in *Saccharomyces cerevisiae* grown with various ethanol concentrations. The Journal of Industrial Microbiology and Biotechnology. 37: 701-706.
6. Dake MS, Amarapurkar SV, Salunkhe ML, Kamble SL (2010) Production of Alcohol by *Saccharomyces* sp. using Natural Carbohydrate Sources. Journal of Advanced Biotechnology. 10(6): 37-41.
5. Dake MS, Jadhav JP, Patil NB (2009) Role of Ca<sup>2+</sup> and Ethanol in The Process of Flocculation. Asian Journal of Chemistry. 21(5): 3419-3426.
4. Jadhav JP, Dake M.S., Patil, NB (2008)  $\alpha$ ,  $\beta$ - Glucan Complex in *Saccharomyces carlsbergensis*. Asian Journal of Chemistry. 20 (1): 55-65. **[Scopus index; Impact factor: 0.268]**
3. Jadhav JP, Dake M.S., Patil, NB (2006) Variations of two pools of Glycogen and Ethanol in *Saccharomyces carlsbergensis*. Asian Journal of Chemistry. 18(2): 1443-1450. **[Scopus index; Impact factor: 0.173]**
2. Jadhav JP, Dake M.S., Patil, NB (2006) Separation and characterization of  $\beta$ - gulcanases from *Penicillium ochro – chloron*. Asian Journal of Chemistry. 18(2): 1191-1198. **[Scopus index; Impact factor: 0.173]**

1. Dake MS, Jadhav JP, Patil NB (2004) Induction and properties of (1-3) –  $\beta$ -D-gulcanases form *Aureobasidium pullulans*. Indian Journal of Biotechnology. 3: 56-64. [**Scopus index; Impact factor: 0.386**]

### **Publications (Conference proceedings)**

1. Amarpurkar SV, Dake MS, Mhatre V and Lokhande N (2009) To study the effect of plant  $\alpha$ -amylase inhibitors from momardica charantia on thermophilus bacterial, fungal and plant amylase. Proceedings: National Conference on Frontiers in Plant Physiology Towards Sustainable Agriculture, 5-7 November.

### **Book (Monograph):**

1. Effect on alcohol production by increase in carbohydrate source and other parameters on yeast fermentation (Monograph). **Publisher:** LAP LAMBERT Academic Publishing GmbH & Co. KG Heinrich-Böcking-Str. 6-8, 66121, Saarbrücken, Germany Pages (1-64) (2012).

### **Book Chapter:**

1. A book Chapter ‘Biodegradable polymers: Renewable nature, life cycle and applications’ for the book “Microbial Factories” on behalf of **Springer**. Page 1-34, vol 2, (2015)

### **Invited Talks:**

1. Manjusha Dake (2018) Invited Talk on ‘Fermentations, Bioremediation and Clinical Biochemistry as a part of **Institute-Academic Interaction** for Biotech PG Students.

**Trainings /Workshops/ Seminars/ Conferences: (Presentation in Conferences: Abstracts Published)**

37. Tiwari S. A., Mandlik B. M., Dambhare S. S., Dake M. S., **Puntambekar A. N.\*** (2020), Biochemical studies on alkaline protease isolated from regional hot water spring of Mumbai region of India at International Conference on Biotechnology, Pune, India (ICBT 2020).
36. Abhishek, **Ashwini Puntambekar**, Manjusha Dake \* (2019), Extraction, purification and characterization of protease inhibitors from *Mentha spaciata* at 3<sup>rd</sup> International Conference on In Sync –With next generation Bioscience (INGB) -2019, Goa, India.
35. Tiwari S. A., Dengle S. S., Dake M. S., **Puntambekar A. N.\*** (2019), Studies on alkaline proteases from regional hot water springs at National Symposium on “Recent Advances in Modern Biology and Biotechnology 2019” (RAMBB 2019), Pune India.
34. Rahalkar C. S., Kore S. V., Dake M. S., **Puntambekar A. N.\*** (2019), Biochemical studies of protease inhibitor from *Cucumis sativus* sap. at National Symposium on “Recent Advances in Modern Biology and Biotechnology 2019” (RAMBB 2019), Pune India.
33. Sarika Dengle, **Ashwini Puntambekar**, Manjusha Dake\* (2019), Screening of alkaliphilic and thermophilic proteolytic bacteria isolated from hot water springs for production of alkaline protease at National Symposium on “Recent Advances in Modern Biology and Biotechnology 2019” (RAMBB 2019), Pune India.
32. Abhishek, **Ashwini Puntambekar**, Manjusha Dake\* Extraction, purification and characterization of protease inhibitor from *Mentha spaciata* at National Symposium on “Recent Advances in Modern Biology and Biotechnology 2019” (RAMBB 2019), Pune India.
31. Dengle S., Kore S.V., Dake M.S., **Puntambekar A. N.\*** (2018), Biochemical studies on the plant protease inhibitor from black eyed peas (*Vigna unguiculata*) at CSIR-IICT Platinum Jubilee International Conference on ‘Biotechnological Research and Innovation for Sustainable Development’ XV BRSI Convention, Hyderabad, India.



30. Singh S., **Puntambekar A.N.**, Dake M.S. (2016), Isolation, Screening and optimization of Alkaline Protease from thermophilic bacteria at International Conference on 'Agricultural Science and Food Technologies' held at Bangalore, India.
29. Agarwal E., **Puntambekar A.N.**, Dake M.S. (2016), Screening of antimicrobial potential of Moringa oleifera pods and seeds at International Conference on 'Agricultural Science and Food Technologies' held at Bangalore, India.
28. Harsha Malode<sup>1</sup>, **Ashwini Puntambekar<sup>2</sup>**, Manjusha Dake<sup>3\*</sup> (2016), Studies on protease inhibitors isolated from plant source at 2<sup>nd</sup> International Conference on Environment and Ecology organized by Bharathiar University Coimbatore, Tamil Nadu In Association with: International Foundation for Environment and Ecology, INDIA.
- 27. Puntambekar Ashwini\***, Pathade Girish, Dake Manjusha (2016), Studies on Alkaline Protease from thermophilic Bacilli, at National Conference on "Advances in Applied, Physical, Chemical and Life Sciences" Dr. D. Y. Patil ACS College, Pune Paper presentation.
26. 27<sup>th</sup> International Carbohydrate Symposium organized by Department of Organic Chemistry, Indian Institute of Science, Bangalore, 560012, India. 12<sup>th</sup>-17<sup>th</sup> January, 2014. Participation by paper presentation on 'Variations of two pools of glycogen in *Saccharomyces cerevisiae* (NCIM 109) grown with variable ethanol concentrations'.
25. **Puntambekar A.N.**, Dake M.S. (2013) "Studies on alkaline lipase from thermophilic Bacilli" at International Conference on Advances in Biotechnology and Bioinformatics (ICABB 2013), Pune India.
24. National Conference on Recent Trends and Future Prospects in Biological Sciences, organized by Department of Botany, Maharashtra Udayagiri Mahavidyalaya, Udgir, Dist. Latur. On 18<sup>th</sup>-19<sup>th</sup> January, 2013. Participation by oral presentation on "Studies On polysaccharide production of fungal sp." (**Got First Prize in Oral Presentation at National Level Conference.**)

- 23. International** Conference on Advances in Biotechnology & Bioinformatics & X  
Convention of The Biotech Research Society, organized by Dr. D. Y. Patil  
Biotechnology & Bioinformatics Institute, Tathawade, Pune-411033 on 25-27, 2013:  
Participation by poster presentation on ‘Isolation of  $\beta$ -galactosidase from a yeast sp.  
isolated from whey.’
- 22.** International Conference on Advances in Biotechnology & Bioinformatics & X  
Convention of The Biotech Research Society, organized by Dr. D. Y. Patil  
Biotechnology & Bioinformatics Institute, Tathawade, Pune-411033 on 25-27, 2013:  
Participation by poster presentation on ‘Antibacterial activity of *Aureobasidium  
pullulans*.’
21. International Conference on Advances in Biotechnology & Bioinformatics & X  
Convention of The Biotech Research Society, organized by Dr. D. Y. Patil  
Biotechnology & Bioinformatics Institute, Tathawade, Pune-411033 on 25-27, 2013:  
Participation by poster presentation on ‘Studies on alkaline lipase from thermophilic  
bacilli.’
- 20. Puntambekar A. N\*.,** Tare A. U, Dake M.S. (2012) “Studies on Proteases from  
Regional Halophilic microbial isolates” poster presentation at National Seminar on  
“Recent Advances in Chemical and Environmental Sciences” (RACES- 2012)”  
organized by Dept. of Chemistry, Prof. Ramkrishna More Arts Commerce and  
Science College Pune in collaboration with BCUD, Pune University. Pune, India.
19. Dake M.S., **Puntambekar A.N.,** Kasaram R. (2012) “Studies on beta glucanase  
isolated from Whey Yeast” at International Conference on Free radicals and  
antioxidants in health and disease at MGM University of Health Sciences, Navi-  
Mumbai, India.

18. International Conference on 'Free Radicals and Antioxidants in Health and Disease' organized by MGM University of Health Sciences, Navi Mumbai on 09th January 2012 Participation by poster presentation on “Studies on  $\beta$ -Glucanase isolated from whey yeast”.
17. Second National Conference on Biotechnology, Bioinformatics and Bioengineering organized by Society for Applied Biotechnology [www.sabt.org.in](http://www.sabt.org.in) Hotel Atria, 204, 'E' Station Road, Kolhapur-416001 on 24 and 25 Feb., 2012. Participation by paper presentation on “Studies on intracellular and extracellular invertases from yeast.”
- 16. Puntambekar A.N.\***, Pathade G., Dake Manjusha (2011) “Studies on alkaline protease from regional microbial isolates” paper presentation at National Seminar on Frontiers in Biotechnology and Bioinformatics, DYPBBI, Pune, India. Paper Presentation Won Second Prize.
- 15. Puntambekar A.N.\***, Pathade G. (2011) “Biochemical Studies on alkaline protease from regional microbial isolates” paper presentation at National Seminar on Biotechnology. CKT College, New Panvel, India.
14. Dake M.S., **Puntambekar A.N.**, Malode H., (2011) “Studies on thermophilic protease from thermophilic bacilli isolated from hot springs”. poster presentation at Annual Biotechnology Conference for students organised by ABCS school of Biotechnology, Pune, India. Secured Second Prize in Poster Competition at National Level Conference.
13. National Seminar on Frontiers in Biotechnology organized by Dr. D.Y. Patil Biotechnology & Bioinformatics Institute, Tathawade, Pune-411033, on February, 2011. Participation by poster presentation on “Studies on lipases from plant sources”.
12. National Seminar on Frontiers in Biotechnology organized by Dr. D.Y. Patil Biotechnology & Bioinformatics Institute, Tathawade, Pune-411033, on February, 2011. Participation by paper presentation on “Isolation of Yeast cells from sugarcane juice and study of  $\alpha$ -Glucan- $\beta$ -Glucan complex in relation to ethanol production as a

Bioenergy source.

**11.Puntambekar A.N.\***, Pathade G.R. (2010) “Biotechnological studies on alkaline proteases and alkaline lipases from microbial isolates” poster presentation at National Seminar on Biotechnology. Annasaheb Magar College, Pune, India

10.State Level Conference on "Recent Trends in Physico Chemical Sciences, Biotechnology & Biodiversity" that was held on 12th and 13th February 2010, organized by Dr. D.Y. Patil A.C.S. College, Pimpri, Pune. Participation by paper presentation.- 'Effect on alcohol production by increase in carbohydrate source and other parameter on yeast fermentation.

9. International conference on "CONVERGENCE OF SCIENCE & ENGINEERING IN EDUCATION AND RESEARCH, A GLOBAL PERSPECTIVE IN THE NEW MILLENIUM" to be held on 21st to 23rd April, 2010. Participation by poster & paper presentation. “Studies on lipid profiles of *Saccharomyces sp.* and effect of physicochemical agents on flocculation.

8. Annual Biotechnology Conference for Students (ABCS-2010)” organized by ABCS-2010, Professor and Head, School of Biotechnology, Email: heos@isquareit.ac.in or sheomohan@yahoo.com; Tel: +91-9545089202 from 13th – 14th November 2010, Pune, India. Participation by poster presentation on “Studies on thermophile protease from Thermophilic bacilli isolated from hot springs”. **Got Second Prize in Poster Competition at National Level Conference.**

7. Annual Biotechnology Conference for Students (ABCS-2010)” organized by ABCS-2010, Professor and Head, School of Biotechnology, Email: sheos@isquareit.ac.in orsheomohan@yahoo.com; Tel: +91-9545089202 from 13th – 14th November 2010, Pune,India. Participation by poster presentation on “Studies on Enzymatic Activity of Microorganisms Symbiotically Associated with Orchid Roots (*Dendrobium Noble*)”.

6. National conference Plant Physiology to be held at Jorhat, Assam Agricultural held during 5<sup>th</sup> to 7<sup>th</sup> Nov. 2009. Participation by oral presentation- To study the effect of plant  $\alpha$  - amylase inhibitors from *Momardica charantia* on thermophilus bacterial  $\alpha$ -amylase.

5.50th Annual conference of AMI, December 15 - 18, 2009. Participation by poster presentation- Studies on Lipases from Microbial Sources.

4. International Symposium on advances in Molecular Medicine & Clinical Implications organized by Reliance Institute of Life Sciences, Navi Mumbai on 24-25 Jan., 2009.

3. Workshop on 'Techniques in Molecular Biology' organized by Dr. D.Y.Patil Pratishtan's Arts, Science & Commerce College on 10<sup>th</sup> Oct., 2007.

2. Workshop in 'Molecular Biology' organized by Bangalor-Genei & Vidya Pratishtan's School of Biotechnology, Baramati, Pune, in 2004.

1. International Conference of SAARC Countries organized by Microbiologist society, Karad on 28<sup>th</sup>-30<sup>th</sup> December, 2002.- Participation by Poster presentation.

### **Others**

1. Campaign on University Research Training organized by Shivaji University, Kolhapur in March 2001.-Participation by Poster presentation.

2. Campaign on University Research Training organized by Shivaji University, Kolhapur in March 2002.-Participation by poster presentation.

### **Countries visited under Faculty exchange programme:**

➤ **Sweden (Skövde):** 2016