



Dr. D.Y. Patil Vidyapeeth's

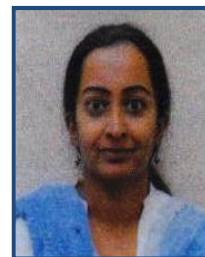
Dr. D. Y. Patil Biotechnology and Bioinformatics Institute

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Mrs. Divya N. Prakash

Designation : Senior Research Fellow (SRF)
Email Id : divya.prakash@dpu.edu.in
Qualification : M.Sc.
Area of Specialization: Molecular Biology, Protein Chemistry



Academic Qualifications

- **M.Sc.** Biochemistry (2001) - **University** of Mysore, Mysore, Karnataka, India.
- **B.Sc.** Botany, Biochemistry & Microbiology (1999) - University of Mysore, Mysore, Karnataka, India.

Additional Qualifications

- Diploma in Industrial Program in Bioinformatics (2008) – Bioinformatics Institute of India, Noida, India.

Professional Experience

1. **Senior Research Fellow (SRF):** July 2012- present on SIDA funded project entitled “Identifying novel biomarkers of COPD (Chronic Obstructive Pulmonary Disease) and design of innovative preventive and therapeutic strategies targeted for the benefit of the Indian population”.
2. **Ph. D in Microbiology (September 2009-July 2012):** entitled “Enzymatic recovery of chitooligosaccharides from marine waste: molecules with therapeutic potential”.
3. **Visiting faculty:** Department of Microbiology, University of Pune, 2011-2012.
4. **Senior Research Fellow (SRF):** December 2006 – September 2009 on DBT funded project entitled “Development of processes for production and downstream processing of food enzymes and their applications ” at Department of Microbiology, University of Pune.
5. **Project Assistant:** November 2004-May 2005 on DBT funded project entitled “Development of varieties with durable resistance to leaf and stripe rust using molecular technology in bread wheat” at National Chemical Laboratory, Pune.
6. **Project Assistant:** November 2003-November 2004 on DBT funded project entitled “Programme for Micropropagation of various commercial and economic plants and its development” at National Chemical Laboratory, Pune.
7. **Scientific Trainee:** October 2001-November 2002 at Bangalore Genei Pvt Ltd (Merck Millipore), Bengaluru, Karnataka, India

Awards and Fellowships

- Ph. D doctoral scholarship from University of Pune – 2010 to 2012.
- Senior Research Fellow (SRF) from Department of Biotechnology (DBT) – 2006 to 2009.
- National Eligibility Test (NET-LS) from University Grants Commission (UGC) – December 2000.

Research Publications

1. Mansi Prakash, Manish Bodas, **Divya Prakash**, Neelu Nawani, Madhukar Khetmalas, Abul Mandal, Cecilia Eriksson (2013) Diverse pathological implications of YKL-40: answers may lie in 'outside-in' signaling. Cellular Signalling. (Impact factor 4.0) pii: S0898-6568(13)00087-9. DOI: 10.1016/j.cellsig.2013.03.016
2. **Divya Prakash**, Neelu Nawani, Mansi Prakash, Manish Bodas, Abul Mandal, Madhukar Khetmalas and Balasaheb Kapadnis (2013) Actinomycetes: A repertory of green catalysts with a potential revenue resource. Biomed Research International. 2013, 8 pp. DOI:10.1155/2013/264020. (Impact factor 2.436)
3. **Divya Prakash**, Vishal Mahale, Ashok Bankar, Neelu Nawani, Smita Zinjarde, Balasaheb Kapadnis (2013) Biosynthesis of colloidal gold nanoparticles by *Streptomyces* sp. NK52 and its anti-lipid peroxidation activity. Indian Journal of Experimental Biology. In press. (Impact factor 1.24)
4. **Divya Prakash**, Nawani N. N. and B. P. Kapadnis (2013) Cloning, expression and characterization of thermophilic and alkalophilic N-acetylglucosaminidase from *Streptomyces* sp. NK52 for the targeted production of N-acetylglucosamine. Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci. DOI:10.1007/s40011-013-0158-x.
5. Shweta Purushe, **Divya Prakash**, Nawani N. N., P. K. Dhakephalkar and B. P. Kapadnis (2012) Biocatalytic potential of an alkalophilic and thermophilic dextranase as a remedial measure for dextran removal during sugar manufacture. Bioresource Technology. 115, 2-7. (Impact factor- 4.9)
6. Ashok Bankar, Mark Winey, **Divya Prakash**, Ameeta Ravi Kumar, Suresh Gosavi, Balu Kapadnis and Smita Zinjarde (2012) Bioleaching of Fly Ash by the Tropical Marine Yeast, *Yarrowia lipolytica* NCIM 3589 Applied Biochemistry and Biotechnology DOI 10.1007/s12010-012-9930-2
7. Milind Gajbhiye, **Divya Prakash**, Smita Jagdale, Sangeeta Ahiwale and B.P. Kapadnis. (2012) Pomogranate borne fungicidal Lactic acid bacteria and their Biodiversity. Proceedings of the National Academy of Sciences, India Section B: Biological Sciences DOI: 10.1007/s40011-012-0055-8.
8. Ahiwale, S.S, **Prakash D**, Gajbhiye M, Jagdale S, Patil N and Kapadnis, B.P. (2012) BVPaP-3, a T7-Like Lytic Phage of *Pseudomonas aeruginosa*: Its Isolation and Characterization. Current Microbiology. DOI: 10.1007/s00284-011-0071-6
9. Milind H Gajbhiye, **Divya Prakash** and Balasaheb P Kapadnis (2012) Identification of Pomegranate Fruit Rot Pathogens and an Antagonist *Lactococcus lactis* ssp. *cremoris* PB6 Journal of Mycology and Plant Pathology, Vol. 42, No.4, 400-406.
10. **Divya Prakash**, Nawani, N. N. and Kapadnis, B. P. (2011) Indigenous and recombinant chitinases as biocontrol agents against plant pathogens: a comparative study. Pest Technology, Global Science Books, UK. pp 26-32.
11. Nawani, N. N., **Divya Prakash** and B. P. Kapadnis. (2010) Extraction, purification and characterization of an antioxidant from marine waste using protease and chitinase cocktail. World Journal of Microbiology and Biotechnology 26, 1509-1517. (Citations- 05, Impact factor- 1.53)

Publications (Review Articles/Book Chapters)

1. **Divya Prakash**, Nawani, N. N. and Kapadnis, B. P. (2012) Microbial mining of value added products from seafood waste and their applications. In: Microorganisms in Environmental Management. Eds: T. Satyanarayana, B. N. Johri and Anil Prakash. Springer Publications. pp 315-333, DOI: 10.1007/978-94-007-2229-3_15.
2. **Divya Prakash**, Nawani, N. N. and Kapadnis, B. P. (2009): Chitin: a target for biological control of agricultural pests. In: Role of Biocontrol Agents for Disease Management in Sustainable Agriculture. Research India Publications. Eds. Ponmurugan, P and Deepa M. pp 456-468.

Gene sequence submissions at NCBI, USA:

- 16S rDNA sequences: 18
- Gene sequences of clones (PCR based cloning): 1

Workshops/Seminars

- Symposium on "**Applications of Laser Flow Cytometry in Biomedical Research**" at Biotechnology and Bioinformatics Institute of the Dr. D.Y. Patil University, Pune (Oct 2011).
- Seminar on "**Biotech Prospects**" at MITCON Institute of Management, Pune (Sept 2011).
- Seminar on "**Analytical Biology**" at Dept of Microbiology, University of Pune (Mar 2009).
- Workshop on "**Management in IPR**" at YASHDA, Pune by Biotech Consortium of India Ltd. (Feb 2009).
- Workshop on "**Essentials of computer aided drug design**" at Biotechnology and Bioinformatics Institute of the Dr. D.Y. Patil University, Pune (Jan 2009).
- Workshop on "**Proficiency in molecular biology and genetic engineering**" at Best Biotech Labs, Bangalore (Sept 2006).
- Workshop on "**HPLC techniques**" at Best Biotech Labs, Bangalore (Sept 2006).

Presentations at various conferences

1. **D. Prakash**, P. Sharma, M. Prakash, N. N. Nawani, M. Bodas, G. D. Tandon, C. Eriksson, A. Mandal and M. B. Khetmalas (2013) Isolation and management of diverse algal strains for the remedial sequestration of Carbon dioxide. International Conference on Algal Biorefinery: A potential source of food, feed, biochemicals, biofuels and biofertilizers (ICAB 2013) at IIT-Kharagpur, West Bengal, January 10-12th, 2013.
2. **Divya Prakash**, Vishal Mahale, Ashok Bankar, Neelu Nawani, Smita Zinjarde, Balasaheb Kapadnis (2012) Green synthesis of colloidal gold nanoparticles by *Streptomyces* sp. NK52 and its anti-lipid peroxidation activity. International Conference on Industrial Biotechnology (ICIB-2012) Punjabi University, Patiala, Nov 21-23, 2012, Patiala, Punjab.
3. Desale Prithviraj, **Prakash Divya**, Keyur Patel, Rupali Aursang, Nawani Neelu, Kapadnis Balasaheb, Khetmalas Madhukar and Mandal Abul (2012) Biosorption of Heavy Metals by Actinomycetes for Treatment of Industrial Effluents. UMT 11th International Annual Symposium on Sustainability Science and Management, Terengganu, Malaysia. 9 to 11 July 2012.
4. N. N. Nawani, **D. Prakash** and B. P. Kapadnis (2011) Biodiversity of chitinolytic and proteolytic bacteria from different environmental habitats. National Academy of Sciences, Nov 2011.
5. Gajbhiye M, **Prakash D**, Ahiwale S.S and Kapadnis B.P (2011) Pomegranate borne fungicidal lactic acid bacteria and their biodiversity. National Academy of Sciences, Nov 2011.
6. **Divya Prakash**, D. Ghorpade, N. N. Nawani, B. P. Kapadnis (2011) Bioconversion of seafood waste by *Streptomyces* sp. for the targeted production of N-acetyl chitoooligosaccharides and evaluation of their anti lipid peroxidation potential. New Horizons In Biotechnology 2011. NIIST, Trivandrum, Nov 21-24 2011.
7. Bhat Vishal, **Prakash Divya**, Nawani N. N and Kapadnis B. P (2011) Diversity of proteolytic and chitinolytic organisms from extreme environmental habitat. Association of Microbiologists of India (AMI) conference Nov 2011.
8. P. Deodre, **D. Prakash**, S. Ahiwale, S. Firodiya and B. P. Kapadnis (2011) Mechanism and Therapeutic applications of the marine product Salinosporamide. Frontiers in Biotechnology and Bioinformatics, Pune, India. 12th Feb 2011.
9. N. N. Nawani, **Divya Prakash** and B. P. Kapadnis. (2011) Bioconversion of seafood waste by *Bacillus* sp. NK395 for the production of Single Cell Protein (SCP) and chitobiose. Microbes in Wastewater & Waste Treatment, Bioremediation and Energy Production, Birla Institute of Technology and Science (BITS) – Pilani, Goa, India. 24-27th Jan 2011.
10. **Divya Prakash**, N. N. Nawani and B. P. Kapadnis (2011) Characterization of crude chitinases from an actinomycete DNK-333 isolated from Kuruva Island mangrove, Kerala. National conference on Frontiers in Life Sciences. S. P. College, Baramati, India. 11-13th Jan 2011.
11. **Divya Prakash**, N. N. Nawani, P. K. Dhakephalkar and B. P. Kapadnis (2010) Cloning, expression and purification of thermophilic and alkalophilic N-acetylglucosaminidase from *Streptomyces* sp. NK52. Research Meet, Mithibai college, Mumbai, India. 11th Dec 2010.

12. **Divya Prakash**, Mitra R, N. N. Nawani and B. P. Kapadnis (2010) Isolation of chitinolytic bacteria from aquatic locations in Waynad, Kerala. International Conference on aquatic Microbiology (Status, Challenges and Opportunities), Annamalai University, Parangipettai, India, 2-4th Sept 2010.
13. N. N. Nawani, **Divya Prakash** and B. P. Kapadnis (2010) Production of chitinases and proteases on shrimp waste by marine *Bacillus* sp. NK-395. International Conference on aquatic Microbiology (Status, Challenges and Opportunities), Annamalai University, Parangipettai, India, 2-4th Sept 2010.
14. **Divya Prakash** and Nawani N.N. (2010) Production of chitinases and proteases on shrimp waste by marine *Bacillus* sp. NK395. International Conference on aquatic Microbiology (Status, Challenges and Opportunities), Annamalai University, Parangipettai, India, 2-4th Sept 2010.
15. Malhotra A., Nawani N. N., Singh A., Pawar S.V., **Prakash D.**, Terdalkar S. and G. D. Tandon (2010) Studies on prospective bioinoculum for the sustenance of mangroves for prevention of Tsunami. International Congress of Environment. Thailand. 21-23rd Jan 2010 (Best paper award).
16. Malhotra A. Nawani N. N., Singh A., S. V. Pawar, **Prakash D.**, Terdalkar S. and G. D. Tandon (2009) Studies on microbial diversity of mangrove ecosystem of Ratnagiri. Proceedings of Climate Change and Challenges in Biodiversity Conservation, Pune, India. 11-12th Dec 2009.
17. **Prakash D.**, N. N. Nawani and B. P. Kapadnis (2009) Application of a chitinolytic phosphate solubilizing bacterium for plant growth promotion. Proceedings of Climate Change and Challenges in Biodiversity Conservation, Pune, India. 11-12th Dec 2009.
18. **Divya Prakash**, N.N.Nawani, P.K.Dhakephalkar and B.P.Kapadnis (2009) Characterization of the chitinolytic system of alkalophilic *Streptomyces* sp. NK52 and its prospective use in biocontrol. First symposium on Trends and advancement in Life Sciences, IISc., Bangalore, India. 27-28th Nov 2009.
19. **Divya Prakash**, N.N.Nawani and B.P. Kapadnis (2009) Isolation and characterization of a phosphate solubilizing chitinolytic bacterium from soil and its potential application as a bioinoculum. Proceedings of Indo-Italian Conference in Emerging Trends in Waste Management Technologies, Pune, India. 3-4th Dec 2009.
20. Purushe S., **Divya Prakash.**, N. N. Nawani, P. K. Dhakephalkar and B. P. Kapadnis (2009) Dextranase from *Streptomyces* sp. NK458. National Conference on Frontiers in Biological Sciences, VV Nagar, Gujarat, India. 27-28th Feb 2009.
21. U. V. Kulkarni, K. U. Khude, P. S. Girme, N. A. Shirdhankar, Nawani N. N., **Divya Prakash** and B. P. Kapadnis (2008) Acylation of N-acetylglucosamine synthesized by action of chitinase on chitin. 3rd International congress on Bioprocesses in food industries (ICBF 2008) and 5th convention of the Biotech Research society of India (BRSI 2008), Hyderabad, India. 6-8th Nov 2008.
22. **Divya Prakash**, Nawani, N. N., P. K. Dhakephalkar and B. P. Kapadnis (2008) Molecular diversity of chitinolytic bacteria. 3rd International congress on Bioprocesses in food industries (ICBF 2008) and 5th convention of the Biotech Research society of India (BRSI 2008), Hyderabad, India. 6-8th Nov 2008.
23. Shweta Purushe, **Divya Prakash**, N. N. Nawani, P.K Dhakephalkar and B.P. Kapadnis (2008) Dextranase production from *Streptomyces mutabilis* with potential application in sugar manufacture. 3rd International congress on Bioprocesses in food industries (ICBF 2008) and 5th convention of the Biotech Research society of India (BRSI 2008), Hyderabad, India. 6-8th Nov 2008.
24. U. V. Kulkarni, K. U. Khude, P. S. Girme, N. A. Shirdhankar, Nawani N. N., **Divya Prakash** and B. P. Kapadnis (2008) Agricultural applications of acylated N-acetylglucosamine synthesized by action of chitinase on chitin. National Conference on Microbiology – from Education to Industry, Nanded, India. 23-24th Aug 2008.
25. Shweta Purushe, **Divya Prakash**, N. N. Nawani, P.K Dhakephalkar and B.P. Kapadnis (2008) Screening of dextranase production from actinomycetes and its production from *Streptomyces mutabilis*. National Conference on Microbiology – from Education to Industry, Nanded, India. 23-24th Aug 2008.
26. Nawani, N. N., **Divya Prakash** and B. P. Kapadnis (2008) Biological breakdown of shell fish offal to generate antifungal metabolites and their possible therapeutic use as biomaterial for topical fungal infections. National Conference on Trends in Biomaterials, Sriperumbudur, Tamilnadu, India. 31st July 2008.
27. **Divya Prakash**, Nawani, N. N. and B. P. Kapadnis (2008) Production and evaluation of antibacterial properties of chitin-chitosan, useful biomaterials from crab shells. National Conference on Trends in Biomaterials, Sriperumbudur, Tamilnadu, India. 31st July 2008.
28. Nawani, N. N., **Divya Prakash**, V.G. Gadekar and Kapadnis, B. P. (2007): Enhancement of chitinase production from *Microbispora* sp. V2 by response surface methodology. 48th conference of AMI, Chennai, India. Dec 2007.
29. **Divya Prakash**, Nawani, N. N. and Kapadnis, B. P. (2007): Phenotypic and molecular diversity of chitinolytic bacteria. 48th conference of AMI, Chennai, India. Dec 2007.