



MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES, FARIDABAD

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DR. PREETI NANDAL

Designation: Assistant Professor

Qualifications: B.Sc., M.Sc. Biotechnology, M. Phil. Biotechnology
PhD. Microbiology (University of Delhi South Campus, New Delhi).

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Experience: 05 Years



[Google Scholar Profile:](#)

https://scholar.google.com/citations?hl=en&user=GJz4yFYAAAAJ&sortby=pubdate&view_op=list_works&gmla=AJsN-F5zN8mRJil3dplwS2aCfExcam72IuDmt8KIRwD0zVv4667UuVPDi7DOYhJ12VQ29zc_-Mw5i4YXgGkx_cCdvj25g9ySLGaiYsHV7ZU336FtfjzHlwRjMhoSpVyK0ihQMdk8IXs2zc510TDqR4toLE889NeCBHSitFfo3uQFIYSIc46SkQY

Research Interests: Renewable resources and Biorefining, Bioremediation, Fermentation, Metabolic engineering, Proteomics

+ Journal Publication Details:

- **Preeti Nandal**, Anju Arora, Shreya Virmani (2021). “An Appraisal on Valorisation of Lignin: A Byproduct from Biorefineries and Paper Industries”. *Biomass and Bioenergy* 155:106295 <https://doi.org/10.1016/j.biombioe.2021.106295>
- P. Samar, Arora, A, Sharma A, Sharma S, **Preeti Nandal** (2021). “Material flow of cellulose in rice straw to ethanol and lignin recovery by NaOH pretreatment coupled with acid washing”. *Biomass Conversion and Biorefining*. <https://doi.org/10.1007/s13399-021-01278-3>
- Anju Arora, **Preeti Nandal**, Jatinder Singh, Madan L. Verma (2020). “Nanobiotechnological advancements in lignocellulosic biomass pretreatment”. *Materials Science for Energy Technologies* 3, 308-318. <https://doi.org/10.1016/j.mset.2019.12.003>
- **Preeti Nandal**, Shalley Sharma, Arora, A (2020). “Bioprospecting non-conventional yeasts for ethanol production from rice straw hydrolysate and their inhibitors tolerance”. *Renewable Energy* 147:1694-1703 <https://doi.org/10.1016/j.renene.2019.09.067>
- Neha Soleja, Ovais Manzoor, **Preeti Nandal**, Mohd. Mohsin (2019). “FRET-based nanosensors for monitoring and quantification of alcohols in living cells”. *Organic and Biomolecular Chemistry*. 17-2413. DOI: 10.1039/c8ob03208d
- Shalley Sharma, **Preeti Nandal**, Arora, A (2018). “Ethanol production from NaOH pretreated rice straw: a cost effective option to manage rice crop residue”. *Waste and Biomass Valorization* 1-8. <https://doi.org/10.1007/s12649-018-0360-4>

<ul style="list-style-type: none"> ▪ Ben Maachia S., Errakhi Rafik, Chérif M, Preeti Nandal, Trupti Mohapatra, Paul Bernard (2015). “<i>Biological control of the grapevine diseases ‘grey mould’ and ‘powdery mildew’ by Bacillus B27 and B29 strains</i>”. <i>Indian Journal of Experimental Biology</i>. 53:109-115.
<ul style="list-style-type: none"> • Deepa Deswal, Rishi Gupta, Preeti Nandal, R.C. Kuhad (2014). “<i>Fungal pretreatment improves amenability of lignocellulosic material for its saccharification to sugars</i>”. <i>Carbohydrate Polymer</i>. 99:264-269.
<ul style="list-style-type: none"> ▪ Preeti Nandal, Sreenivas Rao Ravella, R.C. Kuhad (2013). “<i>Laccase production by Coriolopsis caperata RCK2011: Optimization under solid state fermentation by Taguchi DOE methodology</i>”. <i>Scientific Report (Nature Publishing Group)</i>. 3:1386, 1-7. DOI: 10.1038/srep01386
<ul style="list-style-type: none"> ▪ Bhuvnesh Shrivastava, Preeti Nandal, Abha Sharma, Kavish K. Jain, Y.P. Khasa, Tapan K. Das, Veena Mani, N.J. Kewalramani, S.S. Kundu, R.C. Kuhad (2012). “<i>Solid state bioconversion of wheat straw into digestible and nutritive ruminant feed by Ganoderma sp. rckk02</i>”. <i>Bioresource Technology</i>. 107, 347-351.
<ul style="list-style-type: none"> ▪ K.K. Sharma, Bhuvnesh Shrivastava, Preeti Nandal, Neeta Sehgal, V.R.B. Sastri, A. Kalra, R.C. Kuhad (2011). “<i>Nutritional and toxicological assessment of white rot fermented animal feed</i>”. <i>Indian Journal of Microbiology</i>. 52(2), 185-19

<p>+ Professional Affiliation:</p> <ul style="list-style-type: none"> • Annual membership of American Society for Microbiology (ASM) • Life time membership of Association of Microbiologist of India (AMI)
<p>+ Expert Talk Delivered:</p> <ul style="list-style-type: none"> • “<i>Fermentation of pretreated Lignocellulosic biomass hydrolysate by weak acid tolerant industrial strain</i>”. New Horizons In Biotechnology (NHBT-2019), Trivandrum, Kerala, India, Nov., 20-24, 2019. • “<i>Production of xylooligosaccharides from grass fibre</i>”. British Grassland Society 12th Research Conference, Aberystwyth University, UK, Sept. 7-9, 2015. • “<i>Wheat Straw Degradation and Production of Lignocellulolytic Enzymes by White Rot Fungi</i>”. 4th Congress of European Microbiologists, FEMS 2011, Geneva, Switzerland, June 26-30, 2011. • “<i>A journey from conventional to future methods for Lignocellulosic profiling</i>”. Workshop on Bioprocessing for Energy and Carbon from Agro Residues (BECAR-2018) at IIT Mandi, H.P., India, 23-24 Jan. 2018. • “<i>Inoculum development and Lignocellulolytic enzyme profile under submerged and solid state fermentation of edible mushroom</i>”. 54th Annual Conference of Association of Microbiologists of India at Maharshi Dayanand University, Rohtak, Haryana, India, 17-20 Nov. 2013.

- “Optimization of fungal inoculum and laccase production by White Rot Fungus”. 52nd Annual Conference of Association of Microbiologists of India at Panjab University, Chandigarh, India, 3-6 Nov. 2011.
- “Solid State Fermentation of wheat straw by White-rot fungus for production of Animal Feed”. 50th Annual conference of Association of Microbiologist of India, National Chemical Laboratory, Pune, India, 15-18 Dec. 2009.

+ GenBank Submissions:

- Sequences submitted in GenBank for *Corioloopsis Fungi*

+ Awards:

- National Post doctorate fellowship (NPDF) from SERB, Department of Science and Technology, New Delhi, India, 06 Oct. 2017.
- Travel fellowship for six months from Stapledon Memorial Trust, UK, May-Oct., 2015.
- Department of Biotechnology (DBT, India) International travel grant (DBT/CTEP/02/201100123) for participating in the 4th Congress of European Microbiologists, FEMS 2011, Geneva, Switzerland, June 26-30, 2011
- International travel fellowship of CICS (Centre for international Co-operation in Science) (Promoted by Indian National Science Academy in association with Scientific agencies and Departments), 2 Gandhi Mandapam Road, Chennai, India (10 May 2011)
- Best poster award by American Society of Microbiology (ASM) in 51th Annual Conference of Association of Microbiologists of India at Birla Institute of Technology, Ranchi, India (14-17th Dec. 2010)
- Third position in State Level Science Exhibition at University College, Rohtak, Haryana, India (Feb. 2002)

+ Projects:

- “Engineering of *Saccharomyces cerevisiae* for efficiently ethanol production and its *in vivo* quantification by FRET-based nanosensors”, **Funding Agency:** SERB, DST, New Delhi **Sanctioned Date:** 07 October 2017, 2 years, Principal Investigator- Dr. Preeti Nandal, Amount of Funding: Rs 20,0000/-
- “Production of xylooligosaccharides from Grass fibres”, **Funding Agency:** *Stapledon Memorial trust, United Kingdom*, **Sanctioned Date:** 21st March 2015, 6 months, Principal Investigator- Dr. Preeti Nandal, Amount of Funding: Rs 10,0000/-