

## Dr. Rachana Pandey



### **Designation : Associate Professor**

Dr. D. Y. Patil Biotechnology & Bioinformatics Institute, Tathawade

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**Phone Number** : 020-67919444

### **Educational Qualification:**

- 1 Ph.D (**Biotechnology**) 2001. Banaras Hindu University (BHU), Varanasi, INDIA, Worked on Carbon Source Utilization in *Azospirillum* under the mentorship of Prof. Anil K. Tripathi
2. M.Sc ( Botany) 1995. Banaras Hindu University (BHU), Varanasi, INDIA
3. B.Sc ( Botany Hons.) 1993. Banaras Hindu University (BHU), Varanasi, INDIA
4. Intermediate. 1990 . CBSE Board , INDIA
5. High School , 1988. CBSE Board , INDIA

### **Post Doctoral Experience :**

1. Post Doc (**DBT**) National Chemical Laboratory (NCL), Pune INDIA (2005-2007).
- 2 Research Associate (**RA**) (**UGC-UPE**) Institute of Biotechnology and Bioinformatics (IBB), University of Pune- 411007 INDIA (2007-2008).
3. Research Associate (**RA-CSIR**) Banaras Hindu University (BHU), Varanasi INDIA (2003-2005).

### **Employment Experience:**

1. Assistant Professor at Dr. D. Y. Patil Biotechnology and Bioinformatics Institute ( DYPBBI)
2. Research Associate (RA) in Institute of Bioinformatics and Biotechnology, University of Pune (2007-2008). *Research & Teaching* (UPE-UGC)
3. DBT-Post Doctoral Fellow ( DBT-PDF) at National Chemical Laboratory (NCL) Pune (July 2005-June'2007). *Research*
4. Research Associate (RA) Banaras Hindu University (BHU), Varanasi (April 2003-Feb'2005). *Research* (CSIR)

5.. Senior Research Fellow (SRF) Banaras Hindu University (BHU), Varanasi (April 98- Aug'2000). *Research* (GATE-UGC)

6. Junior Research Fellow (JRF) Banaras Hindu University (BHU), Varanasi (Nov'95- April 98) *Research* (GATE-UGC)

**Field of specialization:** Microbial Molecular Biology and Genomics

**Specific Area of Research Interest :**

1. Bacterial Genomics, Transcriptomics & Proteomics, Molecular Plant –Microbe Interaction

2. Dicarboxylate transport, fungal pathogenesis.

3. Endophytic bacterial diversity by polyphasic taxonomy.

4. Plant growth promoting rhizobacteria (PGPR), Bacterial phosphotransferase system (PTS), Pink Pigmented Facultative Methylophiles (PPFM) in mitigating CH<sub>4</sub> levels. Volatile Organic Compounds (VOCs) in plant growth promotion, Bioprospecting of bacterial endophytes from endemic plants

5. Microbial protease and protease inhibitors in cancer, Antimicrobial peptides (AMP) and Indole signaling,

**AWARDS/HONOURS/MEMBERSHIP OF VARIOUS ACADEMIC BODIES:**

1. Linnaeus–Palme International Faculty Exchange Award to visit University of Skovde, Sweden (2019).

2. Post Doctoral Fellow ( Department of Biotechnology) 2005-2007.

3. Research Associateship ( CSIR ) 2003-2005

4. Research Associateship ( UGC –UPE) 2007-2008.

5. Senior and Junior Research Fellowship ( UGC- GATE)

**Member ship of scientific societies:**

1. Biotech Research Society of India ( BRSI)

2. Association of Microbiologists of India (AMI).

3.. International College of Nutrition (ICN)

**Teaching and Research Experience :**

Assistant Professor DYPBBI (2008-2019).

**Recognized Ph.D. Research Guide** in Biotechnology in Dr. D. Y . Patil Biotechnology and Bioinformatics Institute ( DYPBBI)

1. Vijay Shankar Singh, Prajna Tripathi, Parul Pandey, Durgesh Narain Singh, Chhaya Singh, **Rachna Pandey** and Anil Kumar Tripathi 2019. Dicarboxylate transporters of *Azospirillum brasilense* Sp7 play important role in the colonization of finger millet (*Eleusine coracana*) roots" *Mol. Plant Microbe Interaction* 14:426-430.

2. Chhaya Singh, Parul Pandey, Durgesh Singh, Rachana Pandey, Ajit Shasany, and Anil Tripathi. 2019. Whole genome sequence of four Indian isolates of *Azospirillum brasilense* MRA00633-19R1. **Microbiology Resource Announcement**.

4. N. P. Chavan, **R. Pandey**, N. Nawani, G.D. Tandon, R.K. and M.B. Khetmalas **2016**. Biocontrol potential of actinomycetes against *Xanthomonas axonopodis* pv. *punicea*, a causative agent for oily spot disease of Pomegranate, *Biocontrol Science and Technology*. ISSN 0958-3157.

5. **Rachna Pandey**, Niranjan P Chavan, Nilesh Walokar, Nikita Sharma, Vishal Tripathi, Madhukar B. Khetmalas **2013**. *Pseudomonas stutzeri* RPI: A Plant Growth Promoting Rhizobacteria (PGPR) inhabiting Sunflower (*Helianthus annuus*). *Research J of Biotechnology*, 8 (7) 47-55 .

6 .Mandeep Singh Gujral, Parinita Agrawal, Madhukar B Khetmalas and **Rachna Pandey. 2013** Colonization and plant growth promotion of Sorghum seedlings by endorhizospheric *Serratia sp.* **Acta Biologica Indica.** (2) 343-352.

7. **Rachna Pandey**, Manoj K.Pandey and Udai Pratap Singh. **2013.** Variability in Indian isolates of *Sclerotium rolfsii* by SDS -PAGE. **Archives of Phytopathology and Plant Protection**, 46 (1), 19–28, ISSN: 03235408.

**8. Rachna Pandey** and Udai Pratap Singh.**2013.**Phenolic acid content in different preparations of maize (*Zea mays*) **Int.J.Curr.Microbiol.App.Sci**, 2(6): 84-92. ISSN: 2319-7706.

9.. KV Swamy, Supriya Kore, **Rachna Pandey**,Madhukar B.Khetmalas. **2011.**Extraction Isolation Molecular Modeling and Optimization of Antimicrobial Agents from *Coriandrum sativum*. **Current trends in Biotechnology and Pharmacy.**1033-1036

10. Nilesh Gawade, Supriya Kore, **Rachna Pandey** and Madhukar B. Khetmalas **2010.** Antibacterial Activity of *Coriandrum sativum* CCl<sub>4</sub> Seed Extract Against Drug Resistant Human Pathogens. **Herbal Tech Industry 6 (1): 19-23.**

11. Soumitra Pal Choudhary T. Nagarajan, **Rachna Tripathi**, Muktinath Mishra Daniel Rudulier and Anil K Tripathi **2007.** Strain specific salt tolerance and osmoregulatory mechanisms in *Azospirillum brasilense*. **FEMS Microbiology Letters** 267(1) 72-79. **Impact Factor: 2.0**

12 .Tripathi, A. K., **Tripathi, R.** Ganguli, A, and Bazzicalupo, M. **1998.** Duplication of insertion element IS50 and its transposition in *Azospirillum brasilense*, **Canadian Journal of Microbiology**, 44:1110-1113.**Impact Factor: 1.2**

#### **Book Chapters & Review Articles**

13.Book **chapter:** Plant Growth Promoting Rhizobacteria (PGPR): Back to the roots **Rachna Pandey. 2013.** A book published by I.K International Publications **Asia Tech Publishers**, Edited by R. S. Singh and Ashok Pandey .

14. **Rachna Pandey**, K.V Swamy and Madhukar B.Khetmalas.**2013.** Indole : A Novel Signaling Molecule and its Applications **Indian Journal of Biotechnology Citations 18.**

**15. Rachna Pandey**, Nitin S Patil and Mala Rao.**2006.** Protease and protease inhibitors: implications in antitumorigenesis and drug development. **Int. J. Human Genetics.** 7 (1):67-82 ISSN No.0972-3757