

CURRICULUM-VITAE



1. **NAME** : Dr. Anita Rani Santal
2. **BROAD SUBJECT AREA** : Life Sciences
3. **SPECIALIZATION** : Environmental Microbiology
(Microbial Biotechnology and Bioremediation)
4. **MAILING ADDRESS** : Assistant Professor,
Department of Microbiology,
MD University, Rohtak, Haryana, India
Phone: +91-9802362486 (Mobile)
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5. ACADEMICS

- **Ph.D.** (2010) “Biological Treatment of Distillery Waste using Aerobic Bacterial Cultures” from Department of Microbiology, Kurukshetra University, Kurukshetra, Haryana.
- **M.Sc.** (2005) from Department of Microbiology, Kurukshetra University, Kurukshetra, Haryana.
- **B.Sc.** (2003) from R.K.S.D. College Kaithal, Haryana

6. FELLOWSHIPS

- ❖ From **Feb. 2006 to Feb. 2007** worked as **University Research Scholar** at Department of Microbiology, Kurukshetra University Kurukshetra.
- ❖ From **Feb. 2007 to Feb. 2009** worked as **Junior Research Fellow** at Department of Microbiology, Kurukshetra University Kurukshetra.
- ❖ From **Feb. 2009 to March 2010** worked as **Senior Research Fellow** at Department of Microbiology, Kurukshetra University Kurukshetra.

7. TEACHING EXPERIENCE

- ❖ Assistant Professor (21st sept. 2010-continuing), Department of Microbiology, M. D. University, Rohtak-124001

8. RESEARCH PAPERS PUBLISHED

- **Santal A. R.,** Singh, N. P., Singha, T. K. (2019). Characterization of extracellular polymeric substance producing isolates from wastewaters and their antibacterial prospective. *Journal of Applied Biology and Biotechnology*. Online first.
- **Santal, A. R.,** Singh, N. P., and Saharan, B. S. (2016). A novel application of *Paracoccus pantotrophus* for the decolorization of melanoidins from distillery effluent under static conditions. *Journal of Environmental Management*, 169, 78-83. **IF 4.86**
- **Santal, A.R.,** Singh, N.P. and Saharan, B.S. (2011). Biodegradation and detoxification of melanoidin from distillery effluent using an aerobic bacterial strain SAG₅ of *Alcaligenes faecalis*. *Journal of Hazardous Materials*, 193: 319-324. **IF 7.65**

- **Rani, A.** and Saharan, B.S. (2010). Isolation and characterization of aerobic bacteria for degradation of melanoidin in distillery waste. *Asian Journal of Microbiology, Biotechnology and Environmental Science*.12 (1): 97-102.
- **Rani, A.** and Saharan, B.S. (2009). Optimization of cultural condition for anaerobically treated distillery effluent bioremediation by an isolate *Pseudomonas putida* SAG₄₅. *Journal of Applied and Natural Sciences*. 1(2):132-137.

9. CHAPTERS PUBLISHED

- ❖ Singh, N.P., Sharma, J.K. and **Santal, A.R.** (2016). Biotechnological approaches to remediate soil and water using plant-microbe interactions. In *Phytoremediation: Management of Environmental Contaminants*. Vol. 4 Springer International Publishing. ISBN978-3-319-41810-0
- ❖ Singh, N. P., and **Santal, A. R.** (2015). Phytoremediation of Heavy Metals: The Use of Green Approaches to Clean the Environment. In *Phytoremediation Management of Environmental Contaminants* (pp. 115-129). Springer International Publishing. ISBN978-3-319-10968-8
- ❖ **Santal, A. R.**, and Singh, N. P. (2013). Biodegradation of Melanoidin from Distillery Effluent: Role of Microbes and Their Potential Enzymes. *Biodegradation of hazardous and special products*.Intech open publisher ed. Ronaldo chamy and Francisa Rosenkranz. ISBN978-953-51-1155-9.

10. SEQUENCES SUBMITTED

- ✓ **Rani, A.**, Singh, N. P. and Saharan, B. S. 2009. *Paracoccus pantotrophus* strain SAG₁ 16S ribosomal RNA gene, partial sequences. GeneBank accession number GQ422441.
- ✓ **Rani, A.**, Singh, N. P. and Saharan, B. S. 2009. *Pusillimonas terrae* strain SAG₃ 16S ribosomal RNA gene, partial sequences. GeneBank accession number GQ422442.
- ✓ **Rani, A.**, Singh, N. P. and Saharan, B. S. 2009. *Alcaligenes faecalis* strain SAG₅ 16S ribosomal RNA gene, partial sequences. GeneBank accession number GQ422443.
- ✓ **Rani, A.**, Singh, N. P. and Saharan, B. S. 2009. *Alcaligenes* sp. strain SAG₄₅ 16S ribosomal RNA gene, partial sequences. GeneBank accession number GQ422444.

11. PROJECTS

- ❖ Minor Research Project on Isolation and characterization of biopigment producing bacteria from effluent contaminated soil sanctioned by Dean Student Welfare, M.D. University, Rohtak from Dr. Radha Krishnan Foundation Fund (2015-16) **Completed**
- ❖ **Major Research Project on** Conjoint approaches of microbial consortia and nanobiotechnology for biodegradation of low density polyethylene funded by DST-SERB (2019-2022) (Rs. 50.57 Lakh) **Ongoing**

12. CONFERENCE/SEMINAR ORGANIZED

- ✓ Organizing Secretary, One day National Seminar “Entrepreneurship ideas to action (EI-A-2019): Workshop for Enhancing Women Entrepreneurship” 27th April 2019 at Department of Microbiology, M.D. University, Rohtak
- ✓ Organizing Secretary, International Conference on Microbes for Biotechnological Innovations Organized by Department of Microbiology & AMI-Rohtak Unit, MDU, Rohtak held on 07th December, 2018.
- ✓ Member of Organizing Committee, National Research Colloquium cum Workshop on “Microbes in Food, Energy and Environment: Its importance and Future Prospect” (MFEE-2016) on 2nd April, 2016 at Department of Microbiology, M.D. University, Rohtak
- ✓ Organizing Secretary, One day National Seminar “Trends in Bioprocess Technology: Innovations and Implications in Microbiology” (TBTI²M) on 10th March 2014 at Department of Microbiology, M.D. University, Rohtak.
- ✓ Member of Organizing Committee, 2nd National Seminar on “Microbes in Human Welfare” on 24th March, 2012 at Department of Microbiology, M.D. University, Rohtak
- ✓ Member of Organizing Committee, 1st National Seminar on “Microbes and Resource Management” on 22nd October, 2011 at Department of Microbiology, M.D. University, Rohtak

13. SEMINARS/CONFERENCES/WORKSHOPS

A. Poster presentation

- ❖ Atri, S., Rani, R. Singh, N. P., **Santal, A. R.** (2019) Isolation and characterization of *Azotobacter* sp. and its effect on seed germination of *Cicer arietinum* in International seminar on “Sustainable Environment & Agriculture under Global Climate Change” February 21, 2019 at Maharshi Dayanand University, Rohtak.
- ❖ Anjali, Rani, R. Singh, N. P., **Santal, A. R.** (2018) Biodegradation of naphthalene by an aerobic bacterium from contaminated soil in International Conference on Sustainable Agriculture, Energy, Environment and Technology (Icsaeet-2018) held on February 24-25, 2018 at Maharshi Dayanand University, Rohtak.
- ❖ **Santal, A.R.** Singh, N.P. Pimoli, P. (2018) Probiotic Characterization of bacteria isolated from different fermented foods in National Seminar on “Climate Change and Food Security” held on 25th Jan. 2018 Organized by Centre for Biotechnology, MDU Rohtak
- ❖ Rani, R., Singh, N.P., **Santal, A.R.** and Naveen (2018) Biodegradation of Fluorene by an indigenous bacterial isolate strain SM1 from contaminated site in National Seminar on “Climate Change and Food Security” held on 25th Jan. 2018 Organized by Centre for Biotechnology, MDU Rohtak

- ❖ Kumar, A., Rani, R., Singh, N.P. and **Santal, A.R.** (2018) Biotransformation of Dyes by Bacteria Isolated from Contaminated Soil of Textile Industry. International Conference on Microbes for Biotechnological Innovations Organized by Department of Microbiology & AMI-Rohtak Unit, MDU, Rohtak held on 07th December, 2018.
- ❖ **Santal, A.R.** Singh, N.P. Kanchan (2016) Purification of biopigment and phylogenetic relationship of pigment producing bacteria in National seminar on Frontiers in Genetics and Genomics on 22nd Nov. 2016 at Department of Biotechnology UIET, M.D. University, Rohtak.
- ❖ **Santal, A.R.** Singh, N.P. Rani, R. (2015) Isolation and characterization of Fluorine degrading bacteria” in 56th Annual Conference of AMI entitled “International symposium on Emerging discoveries in Microbiology” organized by School of Life Sciences, Jawaharlal Nehru University, New Delhi from 07-10 Dec., 2015.
- ❖ **Santal, A.R.** Singh, N.P. and Saharan, B.S (2013) UV mutagenesis in bacteria enhanced the decolorization of distillery effluent. In 54th Annual conference of AMI 'Frontier Discoveries and innovations in Microbiology and its interdisciplinary Relevance' (FDMTR-2018) from 17-20 Nov. 2013.
- ❖ Singh, N.P., Yadav, R. and **Santal, A.R.** (2013) Isolation and purification of salt stress tolerant rhizobacteria from the rhizosphere of the *Salicornia* sp. In 54th Annual conference of AMI 'Frontier Discoveries and innovations in Microbiology and its interdisciplinary Relevance' (FDMTR-2018) from 17-20 Nov. 2013.
- ❖ **Anita**, Saharan, B.S., and Ranga, P (2008) “Melanoidin biodegradation using bacteria” in 49th Annual Conference of AMI “International symposium on Microbial Biotechnology: Diversity, Genomics and Metagenomics” held by University of Delhi from 18-20 Nov, 2008.
- ❖ **Anita**, Saharan, B.S., and Ranga, P (2007) Studies on production of PHB using soil isolates from irrigated agro-ecosystem, paper presentation in “Microbes: biofactories of the future”, 48th Annual Conference of AMI, I.I.T. Madras, Chennai, from 18-21 Dec, 2007.

B. Attended and participated

- ✓ National seminar on Convergence of Biotechnology and Engineering for Industry on 26th Nov. 2014 at Department of Biotechnology UIET, M.D. University, Rohtak.
- ✓ National Research Colloquium cum Workshop on “Microbes in Food, Energy and Environment: Its importance and Future Prospect” (MFEE-2016) on 2nd April, 2016 at Department of Microbiology, M.D. University, Rohtak
- ✓ National conference on big data analytics cum workshop on computer aided drug design organized by Centre for Bioinformatics on 7-8 Nov. 2016 M.D. University, Rohtak.

- ✓ National Seminar cum workshop on 22nd Oct., 2016 “Animal ethics and experimentation” organized by central animal house MDU Rohtak.
- ✓ Participated in One day workshop on “Method Development Techniques in HPTLC and HPLC held on 16th Nov. 2016 organized by Department of Pharmaceutical Sciences and Dean Student Welfare.
- ✓ Attended National Seminar on Advances in Virology on 28th sept. 2017 organized by Centre for Medical Biotechnology MDU Rohtak
- ✓ Attended short term Training Course on Plant transgenic technologies from 1st- 16th Oct. 2014 organized by Centre for Biotechnology, MDU Rohtak
- ✓ Acted as a Judge in International Day for the Preservation of the Ozone Layer on 16th Sept. 2014 organized by Department of Environmental Sciences, MDU Rohtak

14. SUPERVISION

Sr. No.	Course	No. of students supervised	Status
1.	Ph.D.	01	Registered
2.	M.Sc. Dissertations	35	Awarded

15. MEMBERSHIP

- ❖ Association of Microbiologists of India (Life Member)
- ❖ The Indian Science Congress Association (Life Member)

(Dr. Anita Rani Santal)