

## Curriculum-vitae

1. Name: Dr. Shikha
2. Designation: Assistant Professor
3. Department: Environmental Science
4. Qualification: M.Sc. Ph.D. (Microbiology), NET, JRF, RA-CSIR
5. Teaching experience: 9 years
6. Post Doctoral Research experience: 13 years
7. Research Projects: One (Completed) Tenure= 13/02/2009-12/02/2012
  - (a) Title of Project: Improvement of strain and optimization of laccase production from microbes
  - (b) Broad and specific fields: Microbial Bioremediation; Microbial enzyme technology
  - (c) Details of funding agency and amount of fund sanctioned (year wise, head, sub-head wise)

Funding agency: Council of Science & Technology, U.P.

Fund sanctioned

S.N.	Year	Budget head	Amount sanctioned	Total
1.	13/02/2009-12/02/2010	Fellowship Fellowship arrear Contingency	96,000=00 48,000=00 60,000=00	2,04,000=00
2.	13/02/2010-12/02/2011	Fellowship Contingency	1,38,857=00 60,000=00	1,98,857=00
3.	13/02/2011-12/02/2012	Fellowship Contingency Fellowship arrear	1,54,000=00 60,000=00 14,000=00	2,28,000=00
4.	Grand Total			6,30,857=00

8. (a) Research Guided (Ph.D.): Degree awarded-03 (2009-14)

Name of the student	Title of Ph.D. Thesis	Research guidance	Date of award
Jaspal Singh	A study on the stress response of N <sub>2</sub> -fixing cyanobacterium Nostoc muscorum against organotin toxicity.	Co-supervisor	18/01/2010
Shiv Shankar	Laccase production from microbes and evaluation of its application for delignification and bleaching of pulp and paper mill effluent.	Supervisor	24/09/2013
Manjul Gupta	Development of vermicompost based soil formulation and evaluation of its potential for crop production in sodic soil	Supervisor	11/04/2014

## 9. Research Publications:

1. Shiv Shankar and Shikha (2015) Effect of metal ions and redox mediators on decolorization of synthetic dyes by crude Laccase from a novel white rot fungus *Peniophora* sp. (NFCCI-2131) *Applied Biochemistry and Biotechnology*, 175: 635-647. DOI 10.1007/s12010-014-1279-2. ISSN: 0273-2289 (print version) 1559-0291 (electronic version) (ISI Thomas Reuters Impact factor-1.687)
2. Shiv Shankar, Uma Shankar and Shikha (2014) Arsenic contamination of groundwater: A review of sources, prevalence, health risks and strategies for mitigation, *The Scientific world journal*. Volume 2014, Article ID 304524, 18 pages <http://dx.doi.org/10.1155/2014/304524> (ISI Thomas Reuters Impact factor-1.219)
3. Sangeeta Saxena, Jyoti Verma, Shikha, Dinesh Raj Modi (2014) RAPD-PCR and 16S rDNA phylogenetic analysis of alkaline protease producing bacteria isolated from soil of India: Identification and detection of genetic variability, *Journal of Genetic Engineering and Biotechnology*, 12:27-35 (<http://dx.doi.org/10.1016/j.jgeb2014.03.001>) [ISSN 1687-157X].
4. Pankaj srivastava, Manjul Gupta, Shikha, Nandita Singh, Shri Krishna Tewari (2014) Amelioration of sodic soil for wheat cultivation using bioaugmented organic soil amendment, *Land Degradation and Development*. Wiley online library.com (doi: 10.1002/ldr.2292) (ISI Thomas Reuters Impact factor-2.058 [online ISSN 1099-145X].
5. M Gupta, Shikha, PK Srivastava, SK Tewari (2014) Quality evaluation of vermicompost at various phases of farm waste composting and during storage, *Advances in Bioresearch* 5 (1), 65-72. [ISSN 2277-1573, Universal Impact factor: 0.9710]
6. M Gupta, Shikha, PK Srivastava, SK Tewari (2014) Prospects of sodic soil amelioration for increased crop production in India, *Advances in Bioresearch* 5 (1), 160-162. [ISSN 2277-1573, Universal Impact factor: 0.9710]
7. M Gupta, PK Srivastava, Shikha, SK Tewari (2014) The role of bioameliorants in sodic soil reclamation, *IJSR Spl. Ed & NCWPCEB*, 52-56. [ISSN 0976-2876 (print), Universal Impact Factor:1.4053 ]
8. Jyoti Verma, Sangeeta Saxena, Shikha (2013) 16S rDNA Based Identification of Alkaline Protease Producing Alkaliphilic *Bacillus* Sp Isolated From Dairy Industry Soil And Evaluation of the Enzyme Potential In Detergent Formulation, *Res. J of Pharmaceutical, Biological and Chemical Sciences*, 4(4), 1339-1349. (ISSN 0975-8585, Impact factor Thomas Reuters JCR-ISI 0. 35)
9. Jyoti Verma, Shikha, Dinesh Raj Modi and Sangeeta Saxena (2013) Characterization of novel alkaline protease producing *Streptomyces* from alkaline soil of Lucknow, (U.P.), India, *International Journal of Pharma and Bio Sciences*, 4(2): (B) 214-224 [ISSN: 0975-6299; Thomas Reuters -JCR-ISI Impact factor: 0.47]
10. Shiv Shankar and Shikha (2012) Laccase production and enzymatic modification of Lignin by a novel *Peniophora* sp. *Applied Biochemistry and Biotechnology* 166 (4):1082-1094. [ISSN: 0273-2289 (print version) 1559-0291 (electronic version), Thomas Reuters-JCR-ISI Impact factor: 1.879].
11. Annapurna Singh, Jaspal Singh and Shikha (2012) Status of ground water and municipal water supply of Lucknow region, U.P., *International Journal of Plant, Animal and*

- Environmental Science . 2 (4) 139-142. [ISSN 2231-4490; Universal Impact factor: 1.0280]
12. S Gautam, A Singh, J Singh, Shikha (2012) Effect of flyash amended soil on growth and yield of Indian mustard (*Brassica juncea*), *Advances in Bioresearch* 3 (40), 39-45. [ISSN 0976-4585, Universal Impact factor: 0.9710]
  13. Pankaj Kumar Srivastava, Manjul Gupta, Rakesh Kumar Upadhyaya, Suresh Sharma, Shikha, Nandita Singh, Sri Krishna Tiwari and Bajrang Singh (2012) Effect of combined application of vermicompost and mineral fertilizer on the growth of *Allium cepa* L. and soil fertility, *J. Plant Nutr. Soil Sci.* 175, 101-107. [ISSN:1522-2624, Thomas Reuters - JCR- ISI Impact factor: 1.663]
  14. Santosh Kumar Yadav, Deepali Bisht, Shikha, Nandan Singh Darmwal (2011) Oxidant and solvent stable alkaline protease from *Aspergillus flavus* and its characterization, *African Journal of Biotechnol.*, 10(43), 8630-8640. [ISSN 1684-5315 © 2011, Thomas Reuters - JCR-ISI Impact factor: 0.57].
  15. Mohd. Muzamil Bhat, Shiv Shankar, Shikha, Mohammad Yunus. R.N. Shukla (2011) Remediation of Hydrocarbon Contaminated Soil through Microbial Degradation- FTIR based prediction, *Advances in Applied Science Research*, 2011, 2 (2): 321-326. [ISSN: 0976-8610].
  16. Adhyayan Sharan, **Shikha**, Nandan Singh Daramwal, (2008) Efficient phosphorus solubilization by mutant strain of *Xanthomonas campestris* using different carbon, nitrogen and phosphorus sources. *World J Microbiol Biotechnol.* 24:3087-3090. [ISSN **0959-3993 (print version) and 1573-0972 (electronic version); Impact factor: 1.532**]
  17. Adhyayan Sharan, **Shikha**, Nandan Singh Daramwal, Rajeeva Gaur (2008) *Xanthomonas campestris*, a novel stress tolerant, phosphate solubilizing bacterial strain from saline –alkali soils. *World J Microbiol Biotechnol.* 24:753-759. [ISSN **0959-3993 (print version) and 1573-0972 (electronic version); Impact factor: 1.532**]
  18. **Shikha**, Sharan, A .and Darmwal N.S. (2007) Improved production of alkaline protease from a mutant of alkalophilic *Bacillus* sp. using molasses as a cost effective substrate. *Bioresource Technology*, (98) 881-885. [ISSN **0960-8524; Impact factor: 4.980**].
  19. Gaur, M. K., **Shikha**, Gaur, R. and Darmwal N.S. (2005) Effect of distillery effluents on soil microorganisms. In: *Biological Diversity: Current trends.* (Gautam S.P., Bansal Y.K. and Pandey, A.K. eds.) Shree Publishers and Distributors, New Delhi, pp.152-157.
  20. Shikha, Singh D.P. and Darmwal N.S. (2004) Effect of Glyphosate on the nitrogen assimilatory system in the wild type and mutant strains of *Anabaena doliolum*. *Indian Journal of Microbiology*, 44(2): 85-89. [ISSN 0046-8991; Impact factor: 0.511].
  21. **Shikha** and D.P. Singh (2004) Effect of glyphosate on photosynthetic properties of wild type and mutant strains of cyanobacterium *Anabaena doliolum*. *Current science*, 86(2): 571-576. [ISSN **0011-3891; Impact factor: 0.935**]
  22. **Shikha**, Singh D.P. and Darmwal N.S. (2004) Effect of glyphosate toxicity on growth, pigment and alkaline p2hosphatase activity in cyanobacterium *Anabaena doliolum*. : A role of inorganic phosphate in the glyphosate tolerance. *Indian Journal of experimental Biology*, 42: 208-213. [ISSN **0019-5189; Impact factor: 0.702**].

### **Book Chapters**

23. Shiv Shankar and **Shikha (2014)** Fungal degradation of Polycyclic aromatic hydrocarbons, In: Biotechnology Volume 11-Biodegradation and Bioremediation (M. Ahmad & J. N. Govil eds.), Studium Press LLC, USA, Volume 11, pp 95-123. (Series ISBN: 1-62699-015-8, Volume ISBN: 1-62699-026-3)
24. Manjul Gupta, Shiv Shankar and **Shikha (2014)** Role of fungal laccases in lignin degradation and decolorization of pulp and paper mill effluent, In: Biotechnology Volume 11-Biodegradation and Bioremediation (M. Ahmad & J. N. Govil eds.), Studium Press LLC, USA, Volume 11, pp 241-272. (Series ISBN: 1-62699-015-8, Volume ISBN: 1-62699-026-3)
25. Shikha, Shiv Shankar and Jaspal Singh (2012): Biofertilizers and Plant growth promoting Rhizobacteria, Microbial applications, (Rajeeva Gaur, S. Mehrotra, R. R. Pandey, eds.), I.K. International Publishing House Pvt. Ltd., New Delhi-110016, India, pp. 234-251. (ISBN 978-93-81141-01-4)
26. Shiv Shankar and Shikha (2011) Fungal laccases: Production and Biotechnological applications in pulp and paper industry. Recent advances in environmental Biotechnology, (Pankaj K. Jain, Vijay K. Gupta, Vivek Bajpai, eds.) Lap Lambert Academic Publishing Ag & Co. Kg, Dudweiler Landstr, Germany. pp. 73-111. [ISBN 978-3-8443-0687-3].

### Conference Proceedings:

27. **Shikha** and Darmwal N.S. (2004) Alkaline protease production from a mutant of *Bacillus* sp. In: Proceedings of the National seminar on “Environmental Management and its impact on National Development” held at Birla College, Kalyan on 28-29<sup>th</sup> Feb. 2004.

