

Curriculum vitae

Jitender Sharma

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Name	:	Dr. Jitender Sharma
Father Name:		Sh. S.R. Gaur
Date of Birth:		July 1 st 1969
Permanent address:		House No. 6 PWD B&R Colony, Near Sector 15 A Hisar -125001, Haryana

Education

- **Post Doctoral Research Fellow** (2004 – 2005) at Biotechnology Research Center, Toyama Prefectural University, **Japan**, with **Prof. Y. Asano**. Worked on *'Enzymatic synthesis of secondary amides and directed evolution of Phenylalanine dehydrogenase gene for altered substrate specificity'*.
 - Doctor of Philosophy in Microbiology, CCS – HAU, Hisar, Haryana, India. Thesis title *'Studies on Sludge Granulation Processes in a UASB reactor Treating Distillery Effluent'*,
 - Masters of Science in Biotechnology, CCS – HAU, Hisar, Haryana, India
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Honors & Fellowships

- **Leadership for Academicians Program (LEAP) Feb 25, 2019 to March 15, 2019 By IIT (BHU), India in collaboration with Penn State University USA Sponsored by MHRD, Government of India**
 - **Best Researcher Award in h-index category by Kurukshetra University Kurukshetra**
 - **DBT, Govt. of India, Overseas Associate ship 2008 – 09**
 - **MEXT Scholarship in biotechnology by Japan Government, April 2004 – May 2005**
 - **UGC – CSIR (JRF), 1992 – 1995**
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Employment Record

- **Professor & Chairman** (2nd April 2021 onwards), Department of Biotechnology, Kurukshetra University, Kurukshetra, Haryana, India
- **Dean, Faculty of Pharmaceutical Sciences**(17th March 2021 onwards) Kurukshetra University, Kurukshetra, Haryana, India
- **Professor** (5th Aug 2015 1st April 2021), Department of Biotechnology, Kurukshetra University, Kurukshetra, Haryana, India

- **Professor & Chairman**(4th Aug 2012-4th Aug 2015), Department of Biotechnology, Kurukshetra University, Kurukshetra, Haryana, India
 - **Professor** (4th Aug 2009 onwards), Department of Biotechnology, Kurukshetra University, Kurukshetra, Haryana, India
 - **Professor & Chairman** (12th Feb- 3rd Aug 2009), Department of Biotechnology, Kurukshetra University, Kurukshetra, Haryana, India
 - **Reader & Chairman** (2006 – 11th Feb., 2009), Department of Biotechnology, Kurukshetra University, Kurukshetra, Haryana, India
 - **Reader** (2004 – 2006), Department of Biotechnology, Kurukshetra University, Kurukshetra, Haryana, India
 - **Senior Lecturer** (1999 – 2004), Department of Biotechnology, Kurukshetra University, Kurukshetra, Haryana, India
 - **Lecturer** (1995 – 1999), Department of Biotechnology, Kurukshetra University, Kurukshetra, Haryana, India
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Completed Research Projects

- **Principal Investigator** (DBT sponsored) titled '*Application of Hydroxynitrile lyases in stereo – selective organic synthesis of biologically active molecules*'
- **Principal Investigator** (UGC sponsored) titled '*Production of thermostable alkaline xylanase from B. stearothermophilus for application in paper & Pulp industry*'
- **Co – Investigator** (DBT sponsored) titled '*Evaluation of xylanases at pilot and mill scale in Paper and pulp industry*'
- **Co – Investigator** (DBT sponsored) titled 'Development of efficient regeneration and genetic transformation systems of mung bean (*Vigna radiata* L. Wilczek)''

Ongoing Research Projects

- **Co–Investigator (HSCSIT-Government of Haryana,sponsored)** "Production of Microbial Silicases for dissolution of silica in Rice Straw for value addition". HSCSIT/2022/142

Publication

1. Rani, K., Singh, V., Yadav, K., Sharma, J. and Singh, N. (2022) Characterisation and application of green synthesized silver nanoparticles derived from leaf and callus of *Viola canescens* Wall. ex Roxb. *Analele Universitatii din Oradea, Fascicula Biologie.*(2) 164-172.
2. Kaur,P., Singh, A., h, & Sharma, J.(2022) Microbial enzymes: Versatile tools for pollution abatement. In "*Metagenomics to Bioremediation*". *Academic Press, London Wall, London EC2Y 5AS, United Kingdom.*755-776.

3. Kaur,P.,Sharma, A., Bhardwaj, N.K., Singh, A. Dalal, S., & Sharma, J.(2022) A novel, simple, and quick plate assay to screen silicolytic bacteria and silicase production using different substrates. doi.org/10.1016/j.biteb.2022.100971 *Bioresource Technology Reports* 17 (2022) 100971
4. Rani, K., Gorach, R. Sharma, J. & Singh, N.(2021) In vitro direct multiplication of *Viola canescens* Wall. ex Roxb.: An important medicinal plant. *Annals of Phytomedicine* 10(2): 200-207, 2021. doi.org/10.21276/ap.2021.10.2.28
5. Kaur,P., Bhardwaj, N.K., Singh, & Sharma, J.(2021) A study elucidating the relation between cellulose dissolution and crystallinity after cellulase treatment at different doses. *3 Biotech* (2021) 11:371.
6. Sango, C., Pathak, P., Bhardwaj, N.K. Dalal, S. & Sharma, J.(2021)Partial purification of bacterial cellulose-xylanolytic enzymes and their application in deinking of photocopier waste paper. *Environ. Sci. Pollut. Res.* doi.org/10.1007/s11356-021-14709-5
7. Kumar, M.; Sikri, N.; Chahal, S.; Sharma, J.; Sharma, B.; Yadav, P.; Bhardwaj, M.; Vashishth, D.; Kadyan, P.; Kataria, S.K.; Dalal, S.(2021) Urease Inhibitory Kinetic Studies of Various Extracts and Pure Compounds from *Cinnamomum* Genus. *Molecules* 26, 3803. <https://doi.org/10.3390/molecules26133803>
8. Sharma, B. and Dalal, S. *, Sharma,J, Vashistha , D. and Kataria, S.(2021) In Silico Studies of Phytochemicals as Potential Urease Inhibitors. *J.Env.Bio-Sci.*, Vol.34 (2)149-152.
9. Sikri,N., Sharma, J. and Dalal, S. (2021)Effect of incorporation of plant extracts in to the soil on physicochemical, biological and enzymatic properties of soil. *Communication in Soil Science and Plant Analysis:* [/10.1080/00103624.2021.1885681](https://doi.org/10.1080/00103624.2021.1885681).
10. Salaria, M.,Frazee, J.,Nautiyal, R., Dhiman, S. & Sharma, J.(2020) Role of the CRISPR technique in decoding the principles of Quorum Sensing. In “*Quorum Sensing: Microbial Rules of Life*”. Publisher: American Chemical Society:49-63.
11. Sango, C. & Sharma, J.(2020) Optimized production of crude cellulose and xylanase enzymes from *Bacillus subtilis* through response surface methodology. In “*Microbes for Humankind and applications*”. Publisher: Associated Publishing Company, New Delhi: 73-96.
12. Groach, R., K. Yadav, J. Sharma and N. Singh (2019) Biosynthesis and characterization of silver nanoparticles using root extract of *Saussurea lappa* (Decne.) Clarke and their antibacterial activity. *J. Environ. Biol.*, 40:1060-1066.

13. Kaur P , Bhardwaj S , Bhardwa N.K.& Sharma J. (2018) Sharma Lignocellulosic Waste as a Sole Substrate for Production of Crude Cellulase from *Bacillus subtilis* PJK6 Under Solid State Fermentation Using Statistical Approach. *J Carbohydrates* 1:1-14.
14. Rashmi, Battan B., Sharma J.(2018) Eco-friendly Microbial Decolorization and Detoxification of Reactive dyes by Isolated Three Culture of *Bacillus* sp. *International Journal of Engineering, Science and Mathematics* 7(3) 330-340.
15. Saini S., Battan B., Rashmi , Maan S. & Sharma J.(2018) Decolourization of dyes by *Bacillus flexus* and *Alcaligenes faecalis* isolated from textile effluent. *Indian J Exp Biol* .56 (11) 820-826.
16. Sango, C., Kaur, P., Bhardwaj, N.K. & Sharma, J.(2018) Bacterial cellulase treatment for enhancing reactivity of pre-hydrolysed kraft dissolving pulp for viscose. *3 Biotech* 8: 271. <https://doi.org/10.1007/s13205-018-1293-0>
17. Sango, C. & Sharma, J.(2018) Enhanced production of cellulose and xylanase enzyme from *Bacillus subtilis* by :one factor at a time approach. In *Emerging trends in Biosciences*. 23-35
18. Tuli, H.S., Gupta V.K., Sharma J. & Garg N. (2018) Isolation and Characterization of Microorganisms for Insect Biocontrol by Chitin Deacetylase . *Asian J. Adv. Basic Sci.:* 6(1), 01-06
19. Gorach R., Solanki A., Singh N., & Sharma J.(2017) Practical exercise book of Plant physiology & Plant Biotechnology. *Krishi Sanskriti Publications*, New Delhi.
20. Govil CM., Aggarwal A. & Sharma J. (2017) Plant Biotechnology and Genetic Engineering. *PHI Learning* , New Delhi.
21. Kaur P, Bhardwaj NK, Sharma J (2017) Efficacy of different commercial cellulases to improve reactivity of mixed hardwood kraft pulp. *Appita Journal* 70(3):260-271
22. Kaur,P., Bhardwaj, N.K.& Sharma, J.(2017) Pentosan Reduction from Mixed Hardwood Kraft Pulp with Alkali Treatment and Its Statistical Optimization. *Lignocellulose* 6(1), 23-35
23. Sharma, S., Sharma, J., Mandhan, R. P., & Malik, S. (2016). Enrichment of Animal Feed: A Potential Application of *Pseudozyma* sp. SPJ. *Current Biochemical Engineering*. 3: 122-127.
24. Kaur,P., Bhardwaj, N.K.& Sharma, J.(2016) Pretreatment with xylanase and its significance in hemicellulose removal from mixed hardwood kraft pulp as a process step for viscose. *Carbohydrate polymers*. 145: 95-102.
25. Kaur,P., Bhardwaj, N.K.& Sharma, J.(2016) Process optimization for hyper production of xylanase via statistical methodology from isolated *Bacillus pumilus* 3GAH using lignocellulosic waste. *Biocatalysis and Agricultural Biotechnology*. 6: 159-167.

26. Kaur,P., Bhardwaj, N.K.& Sharma, J.(2016) Application of microbial enzymes in dissolving pulp production" In "*Frontier Discoveries and Innovations in Interdisciplinary Microbiology*". Springer. Chap-8, p 133-156.
27. Malik, S., Sharma, S., Sharma, J., & Mandhan, R. P. (2015). Bioprocessing of Crop Residues using Fibrolytic Enzymes and *Flavobacterium bolustinum* for Enriching Animal Feed. *International Journal of Biotechnology for Wellness Industries*, 4(1), 12-17.
28. Kaur,P., Bhardwaj, N.K.& Sharma, J.(2015) Qualitative Screening of Isolated Cellulolytic Bacteria Using Cost-Effective Agricultural Residue. *STIRJ* . 1(2): 2394-5680.
29. Dhiman, S. S., Garg, G., Sharma, J., Kalia, V. C., Kang, Y. C., & Lee, J. K. (2014). Reduction in acute ecotoxicity of paper mill effluent by sequential application of xylanase and laccase. *PloS one*, 9(7), e102581.
30. Sharma, S., Sharma, J., & Mandhan, R. P. (2014). Lucrative pectinase production by novel strain *Pseudozyma sp. SPJ* with statistical optimization techniques using agro-industrial residues. *Frontiers in Biology*, 9(4), 317-323.
31. Garg, G., Sharma, J. and Aggarwal, H. (2014) Downstream Processing of Industrially Produced Enzymes. In *Industrial Enzymes: Trends, Scope and Relevance*. pp.33-48. Publisher: NOVA
32. Gautam, R and Sharma, J. (2014) Production and Optimization of Alkaline Cellulase from *Bacillus subtilis* in Submerged Fermentation . *International Journal of Science and Research* .3(6) 1186-1194.
33. Gautam, R and Sharma, J. (2014) Optimization, purification Cellulase from *Bacillus subtilis Subsp. Inaquosorum* under solid state fermentation and its potential application in denim industry. *International Journal of Science and Research* .3(6) 1759-1763.
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36. Gupta, V., Prasanna, R., Cameotra S.S. Dureja P., Singh R.N. & Sharma, J. (2013). Enhancing the production of an antifungal compound from *Anabaena laxa* through modulation of environmental conditions and its characterization. ***Process Biochem.* 48 (2013) 768–774.**
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38. Garg, G., Dhiman, S.S.,Gautam R., Mahajan, R., Patra A.K. & Sharma, J.(2013) Bioscouring of jute fabric by cellulase-free alkalo-thermostable xylanase from *Bacillus pumilus* ASH. ***J. Mol. Catal. B: Enzym.*85– 86 (2013) 43– 48.**
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42. Sharma, S., Mandhan, R.P. and Sharma, J. (2012). Utilization of agro-industrial residues for pectinase production by the novel strain *Pseudozyma* sp. SPJ under solid state cultivation. ***Ann. Microbiol.* 62 (1) 169-176.**
43. Battan, B., Dhiman, S.S., Ahlawat. S., Mahajan, R. & **Sharma, J.** (2012) Application of Thermostable Xylanase of *Bacillus Pumilus* in textile processing. ***In. J. Microbiol.* 52(2):222–229**
44. Battan, B.and Sharma,J.(2012) Microbial lignocellulases: Strengthening enzyme industry. In *Microbes in the Service of Mankind.* pp 354-379. Publisher: JBC Press.
45. Kumar,A., Panwar, S., Grover,S. , **Sharma,J.** & Batish,V.K. (2012) Strain engineering for improved production of chymosin in *E.coli* . In *Microbes in the Service of Mankind.* pp 1050-1064. Publisher: JBC Press.

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51. Sharma, S., Mandhan, R.P. and Sharma, J. (2011). Purification and characterization of an alkaline, thermo tolerant pectinase produced by a novel yeast strain *Pseudozyma* sp. SPJ. *Inter. J. Appl. Eng. Res.* 6(5): 799-805.
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56. Garg, G., Dhiman, S.S., Mahajan, R., Kaur, A. & **Sharma, J.** (2011) Xylanase production using agro-residue in solid-state fermentation from *Bacillus pumilus* ASH for biodelignification of wheat straw pulp. *Biodegradation*. 22(6) 1143-1154.
57. Garg, G., Dhiman, S.S., Mahajan, R., Kaur, A. & **Sharma, J.** (2011). Bleach boosting effect of crude xylanase from *Bacillus stearothermophilus* SDX on wheat straw pulp. *New Biotechnol.* 28(1) : 58-64.
58. Yadav, K., Lakra, W.S., Sharma, J., Goswamy, M. and Singh, A. (2010) Development of cell culture from caudal fin and heart of *Tor tor* (*Hamilton-buchanan*) J. Indian fish Assoc. 37: 37-43.
59. Kumar, A., Grover, S., **Sharma, J.** & Batish, V.K. (2010). Chymosin and other milk coagulants: sources and biotechnological interventions. *Cri. Rev. Biotechnol.* 30 (4): 243-258.
60. Kaur, A., Mahajan, R., Singh, A., Garg, G. & **Sharma, J.** (2010). Application of cellulase-free xylano-pectinolytic enzymes from the same bacterial isolate in biobleaching of kraft pulp. *Biores. Technol.* 101: 9150–9155.
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63. Mahajan, R., Gupta, V. & **Sharma, J.** (2010) Comparison and Suitability of Gel Matrix for Entrapping Higher Content of Enzymes for Commercial Applications. *Indian J. Pharm. Sci.* 72 (2): 80-85.
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- chitosanase gene (cho) in *Anabaena spp.* *Appl. Environ. Microbiol.* 76(9):2769-2777.
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