



Dr. Krishna Kant Sharma

(Associate Professor & Head)

Department of Microbiology,
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Teaching and Research experience:

- Associate Professor in Department of Microbiology, Maharshi Dayanand University, Rohtak (24th February, 2022 - Till Date)
- Assistant Professor (Senior Grade) in Department of Microbiology, Maharshi Dayanand University, Rohtak (24th February, 2010 to 23rd February, 2022)
- Research Associate (1st September, 2007 to 22nd February, 2010) Department of Microbiology, University of Delhi South Campus, New Delhi-110021

Academic Qualification:

Ph.D (2008) entitled “**Screening, Production, Structural properties, Molecular characterization and application of Laccase from *Ganoderma* sp-rckk02**”
Department of Microbiology, **University of Delhi South Campus**, New Delhi-110021.

M.Sc. (2001) Environmental Biology, **University of Delhi South Campus**, New Delhi-110021.

Work Experiences:

1. One year dissertation (M.Sc.) from **Indian Institute of Technology (IIT), Department of Biochemical Engineering and Biotechnology**, New Delhi; on “Biodegradation of Plastics”
2. Worked as a JRF in a DBT funded project entitled “Scale up.....Biotechnological application”, University of Delhi South Campus, New Delhi-110021.

3. Worked as a SRF in a MoEF, AICOPTAX Project on the “Diversity of gram positive bacteria”, University of Delhi South Campus, New Delhi-110021.
4. Worked as a ‘Research Associate’ in a DBT funded project entitled “Microbial Production of Biotech Feed..... Recombinant DNA technology”, University of Delhi South Campus, New Delhi-110021.

Member of National/International scientific societies:

- Life member of “The Association of Microbiologist of India (AMI)”
- Life member “Indian Science Congress”

Awards

- DST- Young scientist award, 2012
- INSA Visiting Scientist Fellowship for 2017-2018
- Governor-Chancellor felicitation for ‘Teaching and Dedicated Research’ on Teachers Day, 5th Sept, 2021
- Best Researcher Award, (2021-22), Maharshi Dayanand University, Rohtak

Research Projects Awarded/Completed/Ongoing:

S. No.	Name of the Research Project (Minor/ Major)	Amount of the Research Project (Rs)	Funding Agency	Period	Status of the Project
1.	Concomitant production of multiple enzymes, scale up and application in the deinking of news paper pulp	25.0 lakh	CSIR	2012-15	completed
2.	Production, cloning and characterization of laccase from soil bacteria	13.0 lakh	UGC	2011-16	completed
3.	Molecular screening for the existence of laccase gene family in different white rot fungi	23.0 lakh	DST	2012-15	completed
4.	Isolation and characterization	2.0 Cr	DBT	2011-17	completed

	of bioactive molecules from Microbes and Plant (Co-ordinated project)				
5.	Molecular insight into the emerging antibiotic resistance pattern of <i>Vibrio cholera</i> (Co. P.I)	9.79 lakh	DRDO	2016-18	completed
6.	Development of an ideal pretreatment and saccharification process for rice straw using microbial cellulase (Co. P.I)	9.25 lakh	DST-Haryana	2017-19	completed
7.	Effect of urbanization on gut microbiome, mycobiome and virome in patients with Inflammatory Bowel Disease from Northern India (Coordinator & P.I.)	65.0 lakh	ICMR, New Delhi	2019-22	ongoing
8.	Microbial Enzymes for Crop Waste Management for Value Addition (P.I.)	5.0 Cr	DBT Builder, Gov of India	2022-2027	ongoing
9.	Development of Point of care sensor for detection of Hemorrhagic Septicemia in bovine (Co-PI)	17.0 lakh	DST, Haryana	2021-2024	ongoing

Research Supervision:

S. No.	Students	Number of Students Supervised/Mentored	Status
1.	PhD	6	Ongoing:4
2.	MSc	43	Supervised: 43 Ongoing: 8
3.	National Post-Doctoral Fellow (DST-SERB)	1	Completed

- **Department Coordinator, DST-FIST Program; Budget Sanctioned: 90 Lakh; S. No. SR/FST/LS-I/2017/4 Dated: 16/01/2018**
- **Organizing Chairperson, 63rd AMI International Conference on "Microbial Technologies for Sustainable Biosphere" 2nd to 4th February, 2023 Maharshi Dayanand University Rohtak**

Publications:

1. Saini S, Kuhad R C, **Sharma KK** (2023) Valorization of rice straw biomass for co-production of bioethanol, biopesticide and biofertilizer following an eco-friendly biorefinery process, *Process Safety and Environmental Protection*, 173, 823-836, <https://doi.org/10.1016/j.psep.2023.03.044> (**I. F. 7.92**)
2. **Krishna Kant Sharma**, Deepti Singh, Shreya Vishwas Mohite, Peter R. Williamson, John F. Kennedy (2023) Metal manipulators and regulators in human pathogens: A comprehensive review on microbial redox copper metalloenzymes “multicopper oxidases and superoxide dismutases”, *International Journal of Biological Macromolecules*, <https://doi.org/10.1016/j.ijbiomac.2023.123534>. (**I. F. 8.02**)
3. Pratik Balwant Shinde, Shreya Vishwas Mohite, Asha Yadav, Mukesh Kumar Singh, Saurabh Kedia, Vineet Ahuja, **Krishna Kant Sharma** (2023) Functional analysis of metalloenzymes from human gut microbiota and their role in ulcerative colitis, *Journal of Applied Microbiology*, <https://doi.org/10.1093/jambio/txad016> (**I. F. 4.0**)
4. Singh, V., Ahlawat, S., Mohan, H., Gill, S.S., **Sharma, K.K.**, 2022. Balancing reactive oxygen species generation by rebooting gut microbiota. *J Appl. Microbiol.* 00, 1–18. <https://doi.org/10.1111/jam.15504> (**I. F. 4.0**)
5. Sonu Saini, Amit Kumar, Barkha Singhal, Ramesh Chander Kuhad, **Krishna Kant Sharma**, Fungal oxidoreductases and CAZymes effectively degrade lignocellulosic component of switchgrass for bioethanol production, 2022, *Fuel*, 328 <https://doi.org/10.1016/j.fuel.2022.125341> (**I. F. 8.03**)
6. Shankar, A., Saini, S. & **Sharma, K.K.** Fungal-integrated second-generation lignocellulosic biorefinery: utilization of agricultural biomass for co-production of lignocellulolytic enzymes, mushroom, fungal polysaccharides, and bioethanol. *Biomass Conv. Bioref.* (2022). <https://doi.org/10.1007/s13399-022-02969-1> (**I. F. 4.05**)

7. Shankar, A., **Sharma, K.K.** Fungal secondary metabolites in food and pharmaceuticals in the era of multi-omics. *Appl Microbiol Biotechnol* 106, 3465–3488 (2022). <https://doi.org/10.1007/s00253-022-11945-8> (I. F. 4.81)
8. Yadav MK, Kumari I, Singh B, **Sharma KK**, Tiwari SK. Probiotics, prebiotics and synbiotics: Safe options for next-generation therapeutics. (2022) *Appl Microbiol Biotechnol*. 11:1–17. doi: 10.1007/s00253-021-11646-8. (I. F. 4.81)
9. Pragya, **Sharma KK**, Kumar A, Singh D, Kumar V, Singh B. (2021). Immobilized phytases: an overview of different strategies, support material, and their applications in improving food and feed nutrition. *Crit Rev Food Sci Nutr*. 29:1-23. doi: 10.1080/10408398.2021.2020719. (I. F. 11.20)
10. Saini S, **Sharma KK** (2021) Fungal lignocellulolytic enzymes and lignocellulose: A critical review on their contribution to multiproduct biorefinery and global biofuel research. *Int J Biol Macromol*. 15;193(Pt B):2304-2319. doi: 10.1016/j.ijbiomac.2021.11.063. (I. F. 8.02)
11. Pandey, M., Bhati, A., Priya, K. **KK Sharma**, B Singha (2021) Precision Postbiotics and Mental Health: the Management of Post-COVID-19 Complications. *Probiotics & Antimicro. Prot.* 22:1–23. <https://doi.org/10.1007/s12602-021-09875-4> (I. F. 4.54)
12. Harish Chandra, **Krishna Kant Sharma**, Olli H. Tuovinen et al., (2021) Pathobionts: mechanisms of survival, expansion, and interaction with host with a focus on *Clostridioides difficile*. *Gut Microbes*. doi.org/10.1080/19490976.2021.1979882 . (I. F. 9.43)
13. Ahlawat S, Shankar A, Vandna, Mohan H, **Sharma KK** (2021). *Yersinia enterocolitica* and *Lactobacillus fermentum* induces differential cellular and behavioral responses during diclofenac biotransformation in rat gut. *Toxicol Appl Pharmacol*. 5;431:115741. doi: 10.1016/j.taap.2021.115741. (I. F. 4.2)
14. Ahlawat, S., Singh, A.K., Shankar, A., Asha Yadav., **Sharma, K.K** (2021) Infected insect gut reveals differentially expressed proteins for cellular redox, metal resistance and secretion system in *Yersinia enterocolitica-Helicoverpa armigera* pathogenic model. *Biotechnol Lett*. <https://doi.org/10.1007/s10529-021-03157-3> (I. F. 2.71)

15. Ahlawat, S., Kumar. P., Mohan H., Goyal, S., **Sharma, K.K** (2021) Inflammatory Bowel Disease: tri-directional relationship between microbiota, immune system and intestinal epithelium. *Critical Reviews in Microbiology* 47(2); 254-273. **(I. F. 8.6)**
16. Neelam, Ahlawat, S., Shankar, A.**Sharma, K.K** (2021) Bioevaluation and molecular docking analysis of novel phenylpropanoid derivatives as potent food preservative and anti-microbials. *3 Biotech* 11, 70. <https://doi.org/10.1007/s13205-020-02636-0> **(I. F. 2.4)**
17. Kumar A, Ahlawat S, Mohan H, **Sharma KK** (2021) Stabilization-destabilization and redox properties of laccases from medicinal mushroom *Ganoderma lucidum* and human pathogen *Yersinia enterocolitica*. *Int J Biol Macromol.* 167:369-381. **(I. F. 8.02)**
18. Ahlawat, S., Asha, **Sharma, K.K.** (2020) Gut–organ axis: a microbial outreach and networking. *Lett. Appl. Microbiol.* 72(6):636-668 <https://doi.org/10.1111/lam.13333>. **(I. F. 2.8)**
19. Ahlawat S, Asha, **Sharma K.K.** (2020) Immunological co-ordination between gut and lungs in SARS-CoV-2 infection. *Virus Res.* 286:198103. Doi:10.1016/j.virusres.2020.198103 **(I. F. 6.28)**
20. Saini, S., Chandel, A. K, & **Sharma, K. K.** (2020). Past practices and current trends in the recovery and purification of first generation ethanol: A learning curve for lignocellulosic ethanol. *Journal of cleaner production*, 268. doi: 10.1016/j.jclepro.2020.122357 **(I. F. 11.07)**
21. Amit Kumar, Sakshi Arora, Kavish Kumar Jain and **Krishna Kant Sharma** (2020) Metabolic coupling in the co-cultured fungal-yeast suite of *Trametes ljubarskyi* and *Rhodotorula mucilaginosa* leads to hyper secretion of laccase isozymes. *Fungal Biology* 123 (12), 913-926. **(I. F. 2.91)**
22. Sonu Saini, Preeti Chutani, Prabhat Kumar and **Krishna Kant Sharma** (2020) Development of an eco-friendly deinking process for the production of bioethanol using diverse hazardous paper wastes. *Renewable energy* 146, 2362-2373 **(I. F. 8.63)**

23. Kavish Kumar Jain, Amit Kumar, Akshay Shankar, Dhananjay Pandey, Bhupender Chaudhary and **Krishna Kant Sharma** (2020) *De novo* transcriptome assembly and protein profiling of copper-induced lignocellulolytic fungus *Ganoderma lucidum* MDU-7 reveals genes involved in lignocellulose degradation and terpenoid biosynthetic pathways. *Genomics*. 112(1):184-198. doi: 10.1016/j.ygeno.2019.01.012. **(I. F. 4.31)**
24. Neelam, Khatkar A, **Sharma KK** (2020). Phenylpropanoids and its derivatives: biological activities and its role in food, pharmaceutical and cosmetic industries. *Critical Reviews in Food Science and Nutrition*. DOI: 10.1080/10408398.2019.1653822. **(I. F. 11.20)**
25. Ahlawat, S., Singh, D., Yadav, A.,.... **Sharma K. K.** (2020). Proteomic analysis reveals the damaging role of low redox laccase from *Yersinia enterocolitica* strain 8081 in the midgut of *Helicoverpa armigera*. *Biotechnol Lett* 42, 2189–2210. <https://doi.org/10.1007/s10529-020-02925-x> **(I. F. 2.71)**
26. Ahlawat S, Singh D, Viridi JS, **Sharma KK.** (2019) Molecular modeling and MD-simulation studies: Fast and reliable tool to study the role of low-redox bacterial laccases in the decolorization of various commercial dyes. *Environ Pollut*. 253:1056-1065. doi: 10.1016/j.envpol.2019.07.083. **(I. F. 8.07)**
27. **Sharma KK,** Singh D and Rawat S (2018) Molecular dynamics simulation studies suggests unconventional roles of non-secretary laccases from enteropathogenic gut bacteria and *Cryptococcus neoformans* serotype D. *Computational Biology and Chemistry*. 73: 41-48. **(I. F. 2.3)**
28. Singh B, **Sharma KK,** Kumari A, Kumar A and Gakhar, SK (2018) Molecular modeling and docking of recombinant HAP-phytase of a thermophilic mould *Sporotrichum thermophile* reveals insights into molecular catalysis and biochemical properties. *International J of Biological Macromolecules*. 115: 501-508. **(I. F. 8.02)**
29. Pramod K, Yadav P, Deshmukh D, Bulle P, Singh D, Singh N, **Sharma KK,** Jain M, Ingole K, Goel A and Yadava P (2017) *Vibrio cholerae* O1 with Haitian variant genotype acquired qnrVC mediated ciprofloxacin resistance in Yavatmal

- an endemic region for cholera in India. *Clinical Microbiology and Infection*. 23: 1005-1006. **(I. F. 13.31)**
30. Kumar A, Singh D, **Sharma KK**, Arora S, Singh AK, Gill SS and Singhal B (2017) Gel-Based Purification and Biochemical Study of Laccase Isozymes from *Ganoderma* sp. and Its Role in Enhanced Cotton Callogenesis. *Front. Microbiol.* 8:674. doi: 10.3389/fmicb.2017.00674 . **(I. F. 4.2)**
31. Gill SS, Gill R, Trivedi DK, Anjum NA, **Sharma KK**, Ansari MW, Ansari AA, Johri AK, Prasad R, Pereira E, Varma A and Tuteja N (2016) *Piriformospora indica*: Potential and Significance in Plant Stress Tolerance. *Frontiers in Microbiology*. 7:332. doi: 10.3389/fmicb.2016.00332. . **(I. F. 4.2)**
32. Chutani, P and **Sharma, K. K.** (2016) Concomitant production of xylanases and cellulases from *Trichoderma longibrachiatum* MDU-6 selected for the deinking of paper waste. *Bioprocess and Biosystem Engineering*. 39: 747-758. **(I. F. 3.21)**
33. Singh, D., Rawat, S., Waseem, M., Gupta, S., Lynn, A., Nitin, M., Ramchiary, N., **Sharma, K.K.** (2016) Molecular modeling and simulation studies of recombinant laccase from *Yersinia enterocolitica* suggests significant role in the biotransformation of non-steroidal anti-inflammatory drugs. *Biochemical and Biophysical Research Communication*. 469(2):306-312. **(I. F. 3.57)**
34. **Sharma, K.K** (2016) Fungal Genome Sequencing: Basic Biology to Biotechnology. *Critical Reviews in Biotechnology*. 36(4):743-759. **(I. F. 8.90)**
35. Chutani, P and **Sharma, K. K.** (2015) Biochemical evaluation of xylanases from various filamentous fungi and their application for the deinking of ozone treated newspaper pulp. *Carbohydrate Polymers*. 127: 54-63. **(I. F. 10.72)**
36. Kumar, A., **Sharma K. K.**, Kumar P. and Ramchiary N (2015) Laccase isozymes from *Ganoderma lucidum* MDU-7: isolation, characterization, catalytic properties and differential role during oxidative stress. *Journal of Molecular Catalysis B: Enzymatic*. 113: 68-75.
37. Singh, D., **Sharma, K. K.**, Jacob, S and Gakhar, S. K (2014) Molecular docking of laccase protein from *Bacillus safensis* DSKK5 isolated from earthworm gut: A novel method to study dye decolorization potential. *Water, Air, and Soil Pollution*. 225: 2175.

38. Singh, D., **Sharma, K. K.**, Dhar, M. S. and Viridi, J. S. (2014) Molecular modeling and docking of novel laccase from multiple serotype of *Yersinia enterocolitica* suggests differential and multiple substrate binding. *Biochemical and Biophysical Research Communications*. 449(1): 157-162.
39. Sharma, S., **Sharma, K.K.** and Kuhad, R.C (2014) An efficient and economical method for extraction of DNA amenable to biotechnological manipulations, from diverse soils and sediments. *Journal of Applied Microbiology*. 116(4):923-933.
40. **Sharma, K.K.**, Shrivastava, B., Sastry, V.R.B., Sehgal, N. and Kuhad, R.C. (2013) Middle-redox potential laccase from *Ganoderma* sp.: its application in improvement of feed for monogastric animals. *Scientific Reports*. 3: 1299.
41. **Sharma, K. K.**, Sharma, S., Karp, M and Kuhad, R. C (2012) Lignolytic enzymes improve soil DNA purity: Solution to methodological challenges of soil metagenomics. *Journal of Molecular Catalysis B: Enzymatic*. 83: 73-79.
42. Diwaniyan, S., **Sharma, K. K** and Kuhad, R. C (2012) Laccase from an alkalitolerant basidiomycetes *Crinipellis* sp. RCK-1: Production optimization by response surface methodology. *Journal of Basic Microbiology*. 52: 397- 407.
43. **Sharma, K. K.**, Shrivastava, B., Nandal, P., Sehgal, N., Sastry, V. B. R. Kalra and Kuhad, R. C (2012) Nutritional and Toxicological Assessment of White-Rot Fermented Animal Feed. *Indian J of Microbiology*. 52(2): 185-190.
44. **Sharma, K.K.** and Kuhad, R. C. (2010) Genetic transformation of lignin degrading fungi facilitated by *Agrobacterium tumefaciens*. *BMC Biotechnology*. 10: 67
45. Kuhad, R.C., Mehta, G., Gupta, R and **Sharma, K. K.** (2010) Fed batch enzymatic saccharification of newspaper cellulose improves the sugar content in the hydrolysates and eventually the ethanol fermentation by *Saccharomyces cerevisiae*. *Biomass and Bioenergy*. 34: 1189-1194.
46. **Sharma, K. K.** and Kuhad, R. C. (2009) An Evidence of Laccase in Archaea. *Indian J of Microbiology*. 49:142-150.
47. **Sharma, K. K.** and R. C. Kuhad (2008) Laccase: Enzyme revisited function redefined. *Indian Journal of Microbiology*. 48: 309-316.

48. Gupta, R., **Sharma, K. K.** and Kuhad, R. C. (2008) Separate hydrolysis and fermentation (SHF) of *Prosopis juliflora*, a woody substrate, for the production of cellulosic ethanol by *Saccharomyces cerevisiae* and *Pichia stipitis*-NCIM 3498 Bioresource Technology. 100: 1214-1220.
49. Gupta, S., Kapoor, M., **Sharma, K. K.** and Kuhad, R. C. (2008) Production and recovery of an alkaline exo-polygalacturonase from *Bacillus subtilis* RCK under solid-state fermentation using statistical approach. Bioresource Technology 99: 937-945.
50. **Sharma, K. K.**, Gupta, S and Kuhad, R.C. (2006). *Agrobacterium*-mediated delivery of marker genes to *Phanerochaete chrysosporium* mycelial pellets, A model transformation system for white-rot fungi. Biotechnology and Applied Biochemistry. 43, 181-186.
51. **Sharma, K. K.**, Kapoor, M., and Kuhad, R. C. (2005). *In vivo* enzymatic digestion, *in vitro* xylanase digestion, metabolic analogues, surfactants and polyethylene glycol ameliorate laccase production from *Ganoderma* sp. kk-02. Letters in Applied Microbiology. 41, 24-31.

Book Chapters:

- 1) Kapoor, R. K., **Sharma, K. K.**, Kuhar, S., and Kuhad, R. C. (2005). Diversity of lignin degrading microorganisms, ligninolytic enzymes and their biotechnological applications. In T. Satyanarayana and B. N. Johri (ed). I. K. International Pvt. Ltd., New Delhi. 815-846.
- 2) **Sharma, K. K.**, Kuhar, S., Kuhad, R. C. and Bhat, P. N. (2007) Combinatorial approaches to improve plant cell wall digestion: possible solution for cattle feed problem. . In R. C. Kuhad and A. Singh (ed). I. K. International Pvt. Ltd. New Delhi.
- 3) Gupta, S., Deepti., Kuhar, S., **Sharma, K. K.**, Singh, A., and Kuhad, R. C. (2007) Microbial Management of Pollutant from Textile Industry, In A. Verma (ed). I. K. International Pvt. Ltd. New Delhi. 209-240.

- 4) Kuhad, R. C., Kuhar, S., Kapoor, M., **Sharma, K. K.**, and Singh, A. (2007) Lignocellulolytic Microorganisms, and their Enzymes. In R. C. Kuhad and A. Singh (ed). I. K. International Pvt. Ltd. New Delhi.
- 5) Kuhar, S., Kapoor, M., Kapoor, R., **Sharma, K. K.**, Singh, A and Kuhar, R. C. (2007) Biodiversity of Ligninolytic Fungi. In R. C. Kuhad and A. Singh (ed). I. K. International Pvt. Ltd. New Delhi.
- 6) **Sharma, K. K** (2012) Sustainable Biofuels from Lignocellulosic Biomass in Genomic era. 44-73, In S. K. Tiwari and B. Singh (ed) Current Trends in Biotechnology. Lambert Academic Publication, Germany. ISBN: 978-3-659-15773-8.
- 7) Ramesh Chander Kuhad, Sarika Kuhar, **Krishna Kant Sharma**, and Bhuvnesh Shrivastava (2013) Microorganisms and Enzymes Involved in Lignin Degradation Vis-à-vis Production of Nutritionally Rich Animal Feed: An Overview 3-44, ch1, Biotechnology for Environmental Management and Resource Recovery Ed. R. C. Kuhad and Ajay Singh, Springer. ISBN 978-81-322-0875-4
- 8) **K. K. Sharma** , Deepti Singh , Sapna, Bijender Singh, and Ramesh Chander Kuhad (2013) Ligninolytic Enzymes in Environmental Management 219-238 ch 12, Biotechnology for Environmental Management and Resource Recovery Ed. R. C. Kuhad and Ajay Singh, Springer. ISBN 978-81-322-0875-4
- 9) Sapna, Bijender Singh , Deepti Singh, and **K. K. Sharma** (2013) Microbial Phytases in Skirmishing and Management of Environmental Phosphorus Pollution 239-260 ch 13, Biotechnology for Environmental Management and Resource Recovery Ed. R. C. Kuhad and Ajay Singh, Springer. ISBN 978-81-322-0875-4
- 10) Bijender Singh, Anil Kumar, Vinay Malik and **Krishna Kant Sharma**. (2013) Phytase: An Enzyme for the Degradation of Anti-Nutritional Factor, Promising Trends in Science Galaxy,(PTSG-2013), 25-32. ISBN: 978-81-920945-3-3
- 11) Deepti Singh, Ekta Narang, Preeti Chutani, Amit Kumar, **K. K. Sharma**, Mahesh Dhar, Jugsaran S Virdi (2014) Isolation, Characterization and Production of Bacterial Laccase from *Bacillus* sp. 439-450, Ch. 39. R. N. Kharwar et al. (eds.), Microbial Diversity and Biotechnology in Food Security, Springer. ISBN 978-81-322-1800-5

- 12) Akula Ramakrishna, Sarvajeet S. Gill, **Krishna K. Sharma**, Narendra Tuteja, and Gokare A. Ravishankar (2016) Indoleamines (Serotonin and Melatonin) and Calcium-Mediated Signaling in Plants. Ch. 7, pp. 85-95. Gokare A. Ravishankar Akula Ramakrishna (eds.), Serotonin and Melatonin: Their Functional Role in Plants, Food, Phytomedicine, and Human Health, Taylor and Francis. ISBN: 978-1-4987-3905-4.
- 13) **Krishna K. Sharma**, Deepti Singh and Amit Kumar (2016) Biochemical and structural studies of laccase isozymes from *Ganoderma lucidum* MDU-7 pp. 390-396. A. Méndez-Vilas (eds.), Microbes in the spotlight: recent progress in the understanding of beneficial and harmful microorganisms, Brown Walker Press. ISBN-13: 9781627346122
- 14). Amit Kumar, Deepti Singh, Anuj K. Chandel and **Krishna K. Sharma** (2017) Technological Advancement in Sustainable Production of Second Generation Ethanol Development: An Appraisal and Future Development pp. 299-336. A. K. Chandel and R. K. Sukumaran (eds.), Sustainable Biofuel Development in India, Springer International Publishing. ISBN 978-3-319-50219-9
- 15). **Krishna Kant Sharma** (2017) Yeast Genome Sequencing: Basic Biology, Human Biology, and Biotechnology: pp. 201-226. Developments in Fungal Biology and Applied Mycology T. Satyanarayana et al. (eds.), Springer International Singapore Pvt. Ltd. ISBN 978-981-10-4768-8
- 16). **Krishna K. Sharma**, Deepti Singh, Bijender Singh, Sarvajeet S. Gill, Amarjeet Singh, Bhuvnesh Shrivastava (2018) Plant-Microbe Interaction and Genome Sequencing: An Evolutionary Insight. Ch.22, pp. 427-449. Crop Improvement through Microbial Biotechnology. Ram Prasad, SS Gill and N Tuteja (eds.), Elsevier. ISBN: 978-0-444-63987-5.
- 17). Punam Kundu, Ritu Gill, Shruti Ahlawat, Naser A. Anjum, **Krishna K. Sharma** et al. (2018) Targeting the redox regulatory mechanisms for abiotic stress tolerance in crops. Ch. 10, Biochemical, physiological and molecular avenues for combating abiotic stress tolerance in plants. S. H. Wani (eds.), Elsevier Inc. ISBN 978-0-12-813066-7.

- 18)** Punam Kundu, Ritu Gill Krishna Kant Sharma (2020) Reactive oxygen species (ROS) management in engineered plants for abiotic stress tolerance. Ch. 20, Advancement in crop improvement techniques. Elsevier Inc. ISBN: 9780128185827
- 19)** Saini, S., Sharma, K.K. (2021) Ligninolytic Fungi from the Indian Subcontinent and Their Contribution to Enzyme Biotechnology. In: Satyanarayana, T., Deshmukh, S.K., Deshpande, M.V. (eds) Progress in Mycology. Springer, Singapore. ISBN: 978-981-16-3306-5. https://doi.org/10.1007/978-981-16-3307-2_6
- 20)** Shruti Ahlawat, Asha, Krishna Kant Sharma (2022) Cancer therapeutics and gut microflora, Editor(s): Asmita Das, In Developments in Immunology, Microbial Crosstalk with Immune System, Academic Press, Pages 207-231, ISBN 9780323961288,
- 21)** Ravina, Subodh, Sharma, K.K., Mohan, H. (2023) Detection Methods for H1N1 Virus. In: Aquino de Muro, M. (eds) Virus-Host Interactions. Methods in Molecular Biology, vol 2610. Humana, New York, NY. ISBN: 978-1-0716-2894-2. https://doi.org/10.1007/978-1-0716-2895-9_10

Paper Published in Conferences:

- 1).** Singh D, **Sharma KK**, Kumar A, Singh R and Jacob SR (2014) Isolation, screening and Identification of laccases from gut bacteria. Proceedings in “Next Generation Sciences: Vision 2020 and Beyond” pp-55-61. ISBN: 987-81-920945-4-0.
- 2).** Chutani P, **Sharma KK**, Dhaka A, Anu, Deepa and Malik V (2014) Screening and production of xylanase from various ascomycetes fungi. Proceedings in “Next Generation Sciences: Vision 2020 and Beyond” pp-301-306. ISBN: 987-81-920945-4-0.
- 3).** Sapna., Jain, J., Kumar, A., **Sharma, K.K** and Singh, B (2012) Phytic acid: An anti-nutritional factor combating diseases. Proceedings in “National Conference on Challenges in combating diseases: Cause to cure” pp-303-310. ISBN: 978-81-920945-2-6.

4). **Sharma, K. K** and Singh, B (2011) Archaea: Housekeeping Genes and Evolutionary Perspective. Proceedings in “National Conference on Environmental and Health Issues: In a changing climatic scenario” pp-29-42.

➤ **Lecture for UGC ePG-Pathsala**

https://drive.google.com/open?id=1oblg8sRARijyNMSSw2e6h_kWQBnc_BKL

- <https://orcid.org/0000-0001-9576-342X>
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