

CURRICULUM VITAE

Dr. Ritu Pasrija

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Educational Qualifications:

Institution	Degree	Year(s)	Field Of Study
Gargi College Delhi University	B.Sc.	2000	Biology
Jamia Hamdard New Delhi	M.Sc.	2002	Biochemistry
Jawaharlal Nehru University, New Delhi	Ph.D.	2007	Yeast Biology, Molecular Biology

Projects:

Title	Funding Agency	Tenure	Amount
To decipher the role of ERMES complex in organelle cross talk and drug resistance in the fungal pathogen <i>Cryptococcus neoformans</i>	DST-SERB	2021-2024	50,12,832/-
Study of the effect of antifungal/ inhibitors on membrane rafts in pathogenic yeast	UGC	2013-2017	14,15,800/-
Study of the importance of phospholipids in membrane rafts and virulence of fungal pathogens	DST-SERB	2013-2017	21,40,000/-
DBT-IPLS (Consortium Project)	IPLS, DBT	2014	6,30,000/-
Elucidation of the Antifungal activity of Anti-neoplastics Endst. DSW/14/358 (dt 22.02.14)	R.K. Fund M.D. University		Mar –Nov 2014
Effect of <i>PSD1</i> gene on drug resistance in a fungal pathogen Endst. DSW/15/712 (dt 11.03.15)	R.K. Fund M.D. University		Mar –Dec 2015
Study of Mechanism of action (MOA) of Extracts of Fruits of <i>Zanthoxylum armatum</i> for their antifungal activity.	R.K. Fund M.D. University		Mar –Dec 2020

Employment Details:

Employer Details	Designation	Duration
Maharshi Dayanand University, Rohtak	Professor	Mar 25, 2025-Till date
Maharshi Dayanand University, Rohtak	Associate Professor	2022- 2025

Maharshi Dayanand University, Rohtak	Assistant Professor	2010- 2022
Guru Nanak Dev University Amritsar	Lecturer	Aug 16, 2007- Dec 2008
Ranbaxy Research Labs	Research Scientist	Dec 2008- Mar 2010

Professional recognition, awards, fellowships received:

1. Research Excellence award by Maharshi Dayanand University in 2022, 2024.
2. Best Scientist award in Poster presentation on "The *Zanthoxylum armatum* fruit's oil Exterminates *Candida* Cells by Inhibiting Ergosterol Biosynthesis, without generating Reactive Oxygen Species, in the International Conference "Emerging Trends in Biotechnology and Sustainable Chemistry (ETBSC-2022)" organized by Baba Farid College and Bhatinda Central University, between 27-29 April 2022.
3. First PhD Student got the best thesis award in university in 2019 by Maharshi Dayanand University.
4. Chosen for Interdisciplinary Life Science Programme (IPLS -DST) for Advanced Research and Education 2.3 Cr, grant among life sciences faculties of the Maharshi Dayanand University in 2013.
5. Awarded the DST –FAST TRACK YOUNG SCIENTIST AWARD for research project in 2013.
6. Awarded travel grant from DBT (Department of Biotechnology), India for poster presentation in the 9th American society for Microbiologists (ASM) Conference on *Candida* and Candidiasis held at Jersey City, New Jersey, USA (24-28 March 2008). (*Grant not availed*)
7. Awarded full travel grant from CSIR for Poster presentation entitled "Structure and function analysis of CaMdr1p, a MFS antifungal efflux transporter protein of *Candida albicans*: identification of amino acid residues critical for drug/H⁺ transport." in the "Second FEBS Advanced Lecture Course Human Fungal Pathogens Molecular Mechanisms of Host-Pathogen Interactions and Virulence" in La Colle-sur-Loup, Nice, France (May 11-17, 2007).
8. Second prize for the poster entitled "A MFS Antiporter *CaMDR1* of *C. albicans* is a Major drug Transporter" in the "BIOSPARKS 2007" an annual research festival organized by School of Life Sciences, J.N.U. (Feb 24-27, 2007).
9. Best poster prize entitled "Structure and function analysis of CaMdr1p, a MFS antifungal efflux transporter protein of *Candida albicans*: identification of amino acid residues critical for drug/H⁺ transport" in the 75th Society of Biological Chemists (SBC), held in Jawaharlal Nehru University (Dec 8-11, 2006).
10. Qualified the Graduate Aptitude Test in Engineering (GATE), conducted by Indian Institute of Technology, Delhi, (92.7 percentile) in 2002.
11. Qualified Junior Research Fellowship (JRF) test, by the Indian Council of Medical Research (ICMR) in 2002.
12. Awarded Junior Research Fellowship (JRF) and Senior Research Fellowship (SRF) from CSIR, Ministry of Human Resource and Development, Govt of India in 2002.
13. First position in M.Sc. part I in 2001 in Jamia Hamdard.

PhD Students-

Completed: 3; Ongoing: 6

Publications:

1. Transcriptional activation, but not mRNA turnover of PrCYP707A1 is linked with Soybean (*Glycine max* L.) sprouts extract induced germination of obligate root parasitic weed, branched broomrape (*Philpanche ramosa* L.). Raman Manoharlal, Pavan MT, Devika HN, Ahona Bajpeyi, GVS Saiprasad, Lucky Duhan, **Ritu Pasrija**. *Russian Journal of Plant Physiology* (Aug 2025)-in press
2. Phytohormones-regulated defense mechanisms in plants against *Macrophomina phaseolina* infection. Duhan L, **Pasrija R***. *J Plant Pathol* (2025). <https://doi.org/10.1007/s42161-025-01974-3>

3. ER-Mitochondrial Crosstalk (ERMES) Regulates Cell Wall Composition in Pathogenic Fungi. Deepika Kumari, Vinay Kumar Bari, **Ritu Pasrija***. *Arch Microbiol* (Aug 2025) 207: 237 <https://doi.org/10.1007/s00203-025-04448-3>
4. Methods and techniques to fabricate PET recycled nanomaterials: a review. Vinay Kumar, Neha Sharma, Mridul Umesh, Poonam Janghu, Suma Sarojini, Pritha Chakraborty & **Ritu Pasrija**. *J Mater Cycles Waste Manag* (July 2025) 27, 2076–2098. <https://doi.org/10.1007/s10163-025-02245-0>
5. ER-mitochondria encounter structure connections determine drug sensitivity and virulence of *Cryptococcus neoformans*. Kumari D, Kumar M, Gaur NA, Duhan L, Sachivkina N, Manoharlal R, **Pasrija Ritu***. *J Cell Sci.* (Apr 2025) 1; 138(9):jcs263558. [doi: 10.1242/jcs.263558](https://doi.org/10.1242/jcs.263558).
6. Unveiling exogenous potential of phytohormones as sustainable arsenals against plant pathogens: molecular signaling and crosstalk insights. Duhan, L., **Pasrija Ritu***. *Mol Biol Rep* (Jan 2025) 52, 98 <https://doi.org/10.1007/s11033-024-10206-3>
7. Enhancing Salicylic Acid Levels by its Exogenous Pretreatment to Mitigate *Fusarium oxysporum*-Induced Biotic Stress in *Vigna mungo*: Defense Pathways Insights. Lucky Duhan, Deepak Kumar, **Ritu Pasrija***. *Plant Cell Reports* (2025) Vol 44(2). <https://doi.org/10.1007/s00299-024-03394-6>
8. Molecular modeling, synthesis and biological evaluation of caffeic acid based Dihydrofolate reductase inhibitors. Renu Sehrawat, **Ritu Pasrija**, Priyanka Rathee, Deepika Kumari & Anurag Khatkar. *BMC Chemistry* (Dec 2024) 18 (1). <https://doi.org/10.1186/s13065-024-01355-4>
9. Bio-oil production and catalytic upgrade to value added product: A review on recent technologies. Vinay Kumar, Neha Sharma, Ali Samy Abdelaal, Pritha Chakraborty, Jithin Thomas, Lucky Duhan, **Ritu Pasrija**, Shivani Dogra, Iyyappan Jayaraj. *Journal of the Energy Institute.* (Feb 2025) Vol 118: 101880. <https://doi.org/10.1016/j.joei.2024.101880>
10. Microplastics in food: Occurrence, toxicity, green analytical detection methods and future challenges. Vinay Kumar, Neha Sharma, Mridul Umesh, Payal Gupta, Preeti Sharma, Thazeem Basheer, Lohith Kumar Dasarahally Huligowda, Jithin Thomas, Suraj Kumar Bhagat, **Ritu Pasrija**. *Green Analytical Chemistry* (Dec 2024) Vol 11: 100152. <https://doi.org/10.1016/j.greeac.2024.100152>
11. Evaluation and characterization of endophytic bacteria from *Capparis decidua* (Forssk.) Edgew for their antifungal and antioxidant activities. Kumari S, Gulia P, Choudhary P, **Pasrija R**, Dangi M, Chhillar AK. *J App Biol Biotech.* (Aug 2024) <http://doi.org/10.7324/JABB.2024.182980>
12. Engineered lignocellulosic based biochar to remove endocrine-disrupting chemicals: Assessment of binding mechanism, Vinay Kumar, Preeti Sharma, **Ritu Pasrija**, Pritha Chakraborty, Thazeem Basheer, Jithin Thomas, Satbir S. Sehgal, Manish Gupta, Khursheed Muzammil. *Chemosphere* (Aug 2024) Vol 362: 142584 <https://doi.org/10.1016/j.chemosphere.2024.142584>. 479 (I.F.: 8.1)
13. Investigation of the influence of pH and temperature on melanization and survival under oxidative stress in *Cryptococcus neoformans*. Deepika Kumari, Nadezhda Sachivkina, **Ritu Pasrija***. *Archives of Microbiology* (July 2024) 206, 355. <https://doi.org/10.1007/s00203-024-04080-7> (I.F.: 2.3)
14. Hybrid Caffeic Acid-Based DHFR Inhibitors as Novel Antimicrobial and Anticancer Agents. Renu Sehrawat, **Ritu Pasrija**, Priyanka Rathee, Deepika Kumari, Anurag Khatkar, Esra Küpeli Akkol and Eduardo Sobarzo-Sánchez. *Antibiotics* (May 2024) 13(6): 479 <https://doi.org/10.3390/antibiotics13060479> (I.F.: 4.3)
15. Single-cell Transcriptomics: Background, Technologies, Applications, and Challenges. Lucky Duhan, Deepika Kumari, Mohammad Naime, Virinder S. Parmar, Anil K. Chhillar, Mehak Dangi & **Ritu Pasrija***. *Mol Biol Rep.* (Apr 2024) (I.F.: 2.6) [10.1007/s11033-024-09553-y](https://doi.org/10.1007/s11033-024-09553-y)
16. The *Zanthoxylum armatum* fruit's oil exterminates *Candida* cells by inhibiting ergosterol biosynthesis without generating reactive oxygen species. **Pasrija R***, Kumari D, Wadhwan S, Chhillar AK, Mittal V. *Int Microbiol* (Apr 2024) 27(2):423-434. [doi: 10.1007/s10123-023-00401-w](https://doi.org/10.1007/s10123-023-00401-w). (I.F.: 2.3)
17. Microplastic residues in clinical samples: A retrospection on sources, entry routes, detection methods and human toxicity. Neha Sharma, Vinay Kumar, Vimal S., Mridul Umesh, Pritha Chakraborty, Thazeem Basheer, Suma Sarojini, Preeti Sharma, **Ritu Pasrija**, Damia Barcelo. *Trends in Analytical Chemistry*, (Apr 2024) Vol 173: 117618. <https://doi.org/10.1016/j.trac.2024.117618> (I.F.: 11.8)

18. Phytohormones mediated antifungal resistance against *Fusarium oxysporum*. Lucky Duhan, Raman Manoharlal, Deepak Kumar, Deepika Kumari, Mamta Saini, G. V. S. Saiprasad, Anil K. Chhillar & **Ritu Pasrija***. *Acta Physiol Plant* (Mar 2024) 46: 37 <https://doi.org/10.1007/s11738-024-03659-3> (I.F.: 2.6)
19. Origin, ecotoxicity, and analytical methods for microplastic detection in aquatic systems. Vinay Kumar, Mridul Umesh, Pritha Chakraborty, Preeti Sharma, Suma Sarojini, Thazeem Basheer, Komalpreet Kaur, **Ritu Pasrija**, Damia Barcelo, *Trends in Analytical Chemistry, (TrAC)* (Jan 2024) Vol 170: 117392. <https://doi.org/10.1016/j.trac.2023.117392> (I.F.: 11.8)
20. Hazard identification of endocrine-disrupting carcinogens (EDCs) in relation to cancers in humans. Neha Sharma, Vinay Kumar, Vimal S., Mridul Umesh, Preeti Sharma, Basheer Thazeem, Komalpreet Kaur, Jithin Thomas, **Ritu Pasrija**, Divya Utreja. *Environmental Toxicology and Pharmacology* (2024) Vol 109: 104480 (I.F.: 4.2)
21. Potential of banana based cellulose materials for advanced applications: A review on properties and technical challenges. Vinay Kumar a, Pritha Chakraborty, Poonam Janghu, Mridul Umesh, Suma Sarojini, **Ritu Pasrija**, Komalpreet Kaur, Sivarama Krishna Lakkaboyana, Vimal Sugumar, Manivannan Nandhagopal, Azhagu Madhavan Sivalingam. *Carbohydrate Polymer Technologies and Applications*. (Dec 2023) Vol 6:100366 <https://doi.org/10.1016/j.carpta.2023.100366> (I.F.: 6.2)
22. Synthesis and characterization of chitosan nanofibers for wound healing and drug delivery application. Vinay Kumar, Neha Sharma, Poonam Janghu, **Ritu Pasrija**, Mridul Umesh, Pritha Chakraborty, Suma Sarojini, Jithin Thomas, *Journal of Drug Delivery Science and Technology* (Sep 2023) 87: 104858 <https://doi.org/10.1016/j.jddst.2023.104858>. (I.F.: 4.5)
23. A Retrospection on Mercury Contamination, Bioaccumulation, and Toxicity in Diverse Environments: Current Insights and Future Prospects. Vinay Kumar, Mridul Umesh, Manoj Kumar Shanmugam, Pritha Chakraborty, Lucky Duhan, Sathyanarayana N. Gummadi, **Ritu Pasrija**, Iyyappan Jayaraj and Lohith Kumar Dasarahally Huligowda. *Sustainability* (2023) 15(18), 13292; <https://doi.org/10.3390/su151813292>. (I.F.: 3.9)
24. Toxicity analysis of endocrine disrupting pesticides on non-target organisms: A critical analysis on toxicity mechanisms. Vinay Kumar, Neha Sharma, Preeti Sharma, **Ritu Pasrija**, Komalpreet Kaur, Mridul Umesh, Basheer Thazeem, *Toxicology and Applied Pharmacology*, (Sep 2023) 474:116623, <https://doi.org/10.1016/j.taap.2023.116623>. (I.F.: 3.8)
25. A critical assessment of technical advances in pharmaceutical removal from wastewater – A critical review. Vinay Kumar, Sivarama Krishna Lakkaboyana, Neha Sharma, Pritha Chakraborty, Mridul Umesh, **Ritu Pasrija**, Jithin Thomas, Vishal Kalebar, Iyyappan Jayaraj, Mukesh Kumar Awasthi, Theerthankar Das, Akeem Adeyemi Oladipo, Damia Barcelo, Ludovic F. Dumeé. *Case Studies in Chemical and Environmental Engineering* (Dec 2023) Vol 8: 100363. <https://doi.org/10.1016/j.cscee.2023.100363>
26. Micropollutants characteristics, fate, and sustainable removal technologies for landfill leachate: A technical perspective. Vinay Kumar, Neha Sharma, Mridul Umesh, Pritha Chakraborty, Komalpreet Kaur, Lucky Duhan, Suma Sarojini, B. Thazeem, **Ritu Pasrija**, Alisa S. Vangnai, Subhrangsu Sundar Maitra. *Journal of Water Process Engineering* (July 2023) Vol 53: 103649 (I.F.: 7.0) doi.org/10.1016/j.jwpe.2023.103649
27. Microbial Engineering Strategies for Synthetic Microplastics Clean Up: A Review on Recent Approaches. Vinay Kumar, Neha Sharma, Lucky Duhan, **Ritu Pasrija**, Jithin Thomas, Mridul Umesh, Sivarama Krishna Lakkaboyana, Rodrigo Andler, Alisa S.Vangnai, Meththika Vithanage, Mukesh Kumar Awasthi, Wen Yi Chia, Pau LokeShow, Damià Barceló. *Environ Toxicol Pharmacol* (Mar 2023) 98:104045 (I.F.: 4.3). doi:[10.1016/j.etap.2022.104045](https://doi.org/10.1016/j.etap.2022.104045)
28. Gibberellin A3 mediated enhanced transcriptional rate and mRNA stability of 3-hydroxy-3-methylglutaryl coenzyme A reductase 1 (NtHMGR1) in *Nicotiana tabacum* L. Raman ManoharLal, Lucky Duhan, **Ritu Pasrija**, G.V.S. Sai Prasad *Notulae Scientia Biologicae* (Nov 2022) 14(4):11317 doi: <https://doi.org/10.55779/nsb14411317>
29. Emerging challenges for the agro-industrial food waste utilization: A review on food waste biorefinery. Kumar V, Sharma N, Umesh M, Selvaraj M, Al-Shehri BM, Chakraborty P, Duhan L, Sharma S, **Pasrija R**,

- Awasthi MK, Lakkaboyana SR, Andler R, Bhatnagar A, Maitra SS. *Bioresour Technol.* (Oct 2022) 362:127790. (I.F.: 9.7) [doi: 10.1016/j.biortech.2022.127790](https://doi.org/10.1016/j.biortech.2022.127790)
30. Resolving the equation between mucormycosis and COVID-19 disease. Pasrija R*, Naime M. *Mol Biol Rep.* (Jan 2022) 22:1–8. [doi: 10.1007/s11033-021-07085-3](https://doi.org/10.1007/s11033-021-07085-3). (I.F.: 2.6)
 31. The deregulated immune reaction and cytokines release storm (CRS) in COVID-19 disease. Pasrija R*, Naime M. *Int Immunopharmacol.* (2021) 90:107225. (I.F.: 4.8) [doi: 10.1016/j.intimp.2020.107225](https://doi.org/10.1016/j.intimp.2020.107225)
 32. TheERMES (Endoplasmic Reticulum and Mitochondria Encounter Structures) mediated functions in fungi. Kundu D, Pasrija R* (2020) *Mitochondrion*. 52:89-99. (I.F.: 3.9) doi.org/10.1016/j.mito.2020.02.010
 33. Phospholipid biosynthesis disruption renders the yeast cells sensitive to antifungals. Deepika Kundu, Saif Hameed, Zeeshan Fatima, Ritu Pasrija*. *Folia Microbiol (Praha)* (2020) 65: p 121–131 [doi: 10.1007/s12223-019-00713-3](https://doi.org/10.1007/s12223-019-00713-3) (I.F.: 2.4)
 34. The E-helix is a central core in a conserved helical bundle involved in Nucleotide binding and transmembrane domain intercalation in the ABC transporter superfamily. Poonam Vishwakarma, Atanu Banerjee, Ritu Pasrija, Rajendra Prasad, Andrew M. Lynn. *International Journal of Biological Macromolecules* (2019) 127: 95–106. (I.F.: 8.0)
 35. Phylogenetic and conservation analysis of MFS transporters. Poonam Vishwakarma, Atanu Banerjee, Ritu Pasrija, Rajendra Prasad, Andrew M. Lynn. *3 Biotech* (Nov 2018) 8(11):462 (I.F.: 2.89)
 36. Interaction of curcumin with azoles and polyenes against *Aspergillus* infections. Ritu Pasrija and Deepika Kundu. *Research J Life Sciences, Bioinformatics, Pharmaceutical and Chemical Sciences* (July 2018) 4(4): 271-279.
 37. First report of Antifungal activity of Tamoxifen against Filamentous Fungi. Ritu Pasrija, Deepika Kundu. *International Journal of Life Sciences Research* (2018) 6(4): 296-298
 38. ABC (ATP binding cassette) multidrug transporter Cdr1p of *C. albicans* prefer to be within membrane rafts. Ritu Pasrija, Deepika Kundu & Mohammad Naime. *Reviewed Proceedings of National Seminar on PTSG* (2014) (ISBN: 978-81-920945-3-3): 340-351.
 39. Rational Mutational Analysis of a multidrug MFS transporter CaMdr1p of *C. albicans* by employing a Membrane environment based Computational approach to predict functionally critical amino acids. Khyati Kapoor, Mohammad Rehan, Ajeeta Kaushiki, Ritu Pasrija, Andrew Lynn & Rajendra Prasad. *PLoS Comput Biol* (2009) 5(12): e1000624. [doi:10.1371/journal.pcbi.1000624](https://doi.org/10.1371/journal.pcbi.1000624) (I.F.: 4.5)
 40. CaCdr1p and CaMdr1p multidrug transporters of *Candida albicans* belonging to superfamilies of ABC and MFS, respectively, display different lipid specificities. Ritu Pasrija, Sneha L. Panwar and R. Prasad. *Antimicrobial Agents and chemotherapy* (2008) Feb; 52(2): 694-704. (I.F.: 4.5)
 41. Membrane Homeostasis and Multidrug Resistance in Yeasts. Sneha L. Panwar, Ritu Pasrija and R. Prasad. *Biosciences Reports* (2008) 28: 217–228. (I.F.: 3.9)
 42. Structure and function analysis of CaMdr1p, a MFS antifungal efflux transporter protein of *C. albicans*: identification of amino acid residues critical for drug/H⁺ transport. Ritu Pasrija, D. Banerjee and R. Prasad. *Eukaryotic Cell* (2007) Mar; 6(3): 443-53. (I.F.: 3.5)
 43. Squalene epoxidase encoded by *ERG1* affects morphogenesis and drug susceptibilities of *C. albicans*. Ritu Pasrija, S. Krishnamurthy, T. Prasad, Joachim F. Ernst and R. Prasad. *Journal of Antimicrobial Chemotherapy* (2005) Jun; 55(6): 905-13. (I.F.: 5.7)
 44. Lipid Fluctuations affect the drug susceptibilities and morphogenesis in *C. albicans*. Ritu Pasrija, T. Prasad, R. Prasad. *Biochemical Society Transactions* (2005) Nov; 33(Pt 5): 1219-23. (I.F.: 4.919)

Books

1. Ritu Pasrija, Deepika Kumari. *Protocols for Studying Pathogenic Fungi.* (2025) (262 pages) Springer. Singapore. ISBN: 978-981-96-7047-5. <https://doi.org/10.1007/978-981-96-7047-5>.
2. Ritu Pasrija, *Lipids and Drug Resistance in Fungi: A study* (2016). Lambert. ISBN: 978-3-659-85587-0

Chapters

1. Sheetal Alchoni, Prerna Rani, Ashish Kumar, Raman Manoharlal, **Ritu Pasrija**. Harnessing microbes for drought stress mitigation: a promising approach for water stress management in plants. (Chapter 10) p 169-198. **(Aug 2025)** In: Climate Change and Agricultural Ecosystems. Elsevier. ISBN: 978-0-443-26521-1.
2. Sharma, P., Kumari, D., Kumari, P., Kumar, A., **Pasrija R***. Factors Affecting Drug Resistance and Virulence in Fungal Pathogen. (Chapter 7) p 175–201 **(Nov 2024)**. In: Hameed, S., Vijayaraghavan, P. (eds) Recent Advances in Human Fungal Diseases. Springer, Singapore. https://doi.org/10.1007/978-981-97-4909-6_7
3. Raman Manoharlal, G.V.S. Saiprasad, Lucky Duhan and **Ritu Pasrija**. Rhizomicrobiome- characterization and potential applications (Chapter 3) p 45-67 **(Oct 2024)**. In Rhizomicrobiome in Sustainable Agriculture and Environment. Joginder Singh Panwar, Vikas Sharma. Academic Press (ISBN: 9780443236914) doi.org/10.1016/B978-0-443-23691-4.00003-8
4. Hemlata Kumari, Minakshi, Shaurya Prakash, **Ritu Pasrija**, Antresh Kumar. Nanotechnology: An Advanced Approach toward the Treatment of Fungal Infections (Chapter 12) **(July 2024)**. In: Human Fungal Diseases: Diagnostics, Pathogenesis, Drug Resistance and Therapeutics (1st ed.). Hameed, S. (Ed.). CRC Press. <https://10.1201/9781032642864-12>
5. Shaurya Prakash, Hemlata Kumari, Minakshi, **Ritu Pasrija**, Antresh Kumar. Unraveling the Intricacies of Carbon Catabolic Repression and Glucose in Fungal Pathogenesis (Chapter 13) **(July 2024)**. In: Human Fungal Diseases: Diagnostics, Pathogenesis, Drug Resistance and Therapeutics (1st ed.). Hameed, S. (Ed.). CRC Press. <https://10.1201/9781032642864-13>
6. Deepika Kumari, Pammi Kumari, Preeti Sharma, Antresh Kumar, **Ritu Pasrija***. Fungal Invasion: Deciphering the Pathogenesis of Infection (Chapter 7) **(July 2024)**. In: Human Fungal Diseases: Diagnostics, Pathogenesis, Drug Resistance and Therapeutics (1st ed.). Hameed, S. (Ed.). CRC Press. <https://10.1201/9781032642864-7>
7. Deepika Kumari, Preeti Sharma, Raman Manoharlal, Prabakaran Ravi Chandran, G. V. S. Saiprasad, **Ritu Pasrija*** & Blazena Koukalova **(2024)**. Fungal Biostimulants for Sustainable Agriculture. In: Sayyed, R.Z., Ilyas, N. (eds) Plant Holobiome Engineering for Climate-Smart Agriculture. Sustainable Plant Nutrition in a Changing World. Chapter 31, p 607-616, Springer, Singapore. https://doi.org/10.1007/978-981-99-9388-8_31
8. Lucky Duhan, Deepika Kumari, **Ritu Pasrija***. Citrus Waste Valorization for Value Added Product Production, Waste Valorization for Value-added Products Waste Valorization (Volume 1) **(2023)** 1: 161. Bentham Science. <https://doi.org/10.2174/9789815123074123010010>
9. Shefali Patel, Susmita Sahoo, Vinay Kumar, Sivarama Krishna Lakkaboyana, **Ritu Pasrija**. Use of Date Palm Fruit Processing Wastes to Produce High-Value Products, Waste Valorization for Value-added Products Waste Valorization (Volume 1) **(2023)** 1: 147. Bentham Science. <https://doi.org/10.2174/9789815123074123010009>
10. Deepika Kumari, Lucky Duhan, Raman Manoharlal, G.V.S. Sai Prasad, Marlia Mohd Hanafiah, **Ritu Pasrija*** Green Technologies for Crop-Pest Control **(2023)** In: Green Chemistry in Agriculture and Food Production. CRC Press. DOI: 10.1201/9780429289538-2
11. **Pasrija, R*** (2022) Bioinformatics Overviews. In: Dutta, S., Gochhait, S. (eds) Information Retrieval in Bioinformatics. Palgrave Macmillan, Singapore. https://doi.org/10.1007/978-981-19-6506-7_1
12. Duhan, L., Kumari, D., Verma, R., **Pasrija, R*** Fungal Hydrolytic Enzymes Produced by Plant Growth-Promoting Rhizobacteria (PGPR) **(2022)**. In: Sayyed, R.Z., Uarrota, V.G. (eds) Secondary Metabolites and Volatiles of PGPR in Plant-Growth Promotion. Springer, Cham. https://doi.org/10.1007/978-3-031-07559-9_16
13. **Pasrija, R*** (2022) Pharmaceutical Biotechnology and Drug Design. In: 'Handbook of Biotechnology. Daya Publishing & Astral International. (ISBN: 978-93-5461-364-7)

14. **Ritu Pasrija***, Kundu D. (2020) Role of Mitochondria in Fungal Drug Resistance. In: Pathogenicity and Drug resistance of Human Pathogens (Mechanisms and Novel Approaches) Springer Press. (ISBN: 978-981-32-9448-6)
15. **Ritu Pasrija*** (2016) THE WONDER DRUG: Curcumin as anti-infective agent. In: HERBAL MEDICINES, Studium Press LLC, USA (ISBN:978-93-85046-09-04)
16. **Ritu Pasrija*** (2016) Membrane lipids and multidrug resistance in the pathogenic yeast *Candida albicans*. Lambert Academic Press. Germany, (ISBN:978-3-659-85587-0)

Life membership-

1. Society of Biological Chemists (SBC)
2. The Indian Science Congress
3. Association of Microbiologists of India (AMI)
4. International Society for Human and Animal Mycology (ISHAM-2022)

Other Duties

- Member of PGBOS (PG Board of studies 2010-12; 2014-16; 2018-20)
- Member of DRC (Doctorate Research committee 2013, 2023)
- Member of Life Science Committee (2020, 2024)
- Department Coordinator of Career Counselling & Placement Cell
- Department Coordinator for Alumni Cell
- Departmental Coordinator of University-Industry Liaison Cell
- Member, counseling committee for M.Sc. admission
- Member, counseling committee for Ph.D. admission
- Member, Departmental Anti-Ragging Committee

Reviewer:

- Reviewer for DST-SERB Projects
- Journals including Microbiological Research, Drug Development Research, Journal of Cellular and Molecular Medicine, PloS One, Biotechnology and Applied Biochemistry, Critical Care Research and Practice, Frontier in Pharmacology, Journal of Diabetes and Metabolic Disorders, Plant Gene, Plant pathology, Letters in Applied Microbiology, etc

Oral/Posters presentation and Conferences attended-

1. Poster entitled **“Structure and function analysis of CaMdr1p, a MFS antifungal efflux transporter protein of *Candida albicans*: identification of amino acid residues critical for drug/H⁺ transport.”** in the ‘Second FEBS Advanced Lecture Course Human Fungal Pathogens Molecular Mechanisms of Host-Pathogen Interactions and Virulence’ in La Colle-sur-Loup, France between May 11-17, 2007.
2. Poster entitled **“A MFS Antiporter *CaMDR1* of *C. albicans* is a Major drug Transporter”** in the **‘BYFF 2007 (Biology of yeast and filamentous fungi)’** an International Meeting on Yeast Biology held at the National Chemical Laboratory (NCL), Pune, India, Feb 15-17, 2007.
3. Poster entitled **“Membrane raft lipid constituents affect drug susceptibilities of *C. albicans*”** in the **‘BYFF 2007’** an International Meeting held at the National Chemical Laboratory (NCL), Pune, India, Feb 15-17, 2007.
4. Poster entitled **“*ERG1* of *C. albicans* affect the drug susceptibility and morphogenesis”** in the **‘Yeast 2005’** an International Meeting held at the Indian Institute of Science (IISc), Bangalore, India, Sep 24-27, 2005.
5. Poster entitled **“Structure and function analysis of CaMdr1p, a MFS antifungal efflux transporter protein of *C. albicans*: identification of amino acid residues critical for drug/H⁺ transport.”** in the

- '75th Society of Biological Chemists (SBC)'** an annual Meeting held at Jawaharlal Nehru University, Dec 8-11, 2006.
6. Poster entitled **"Altered membrane lipid environment affects drug resistance in yeast cells"** in the **'Yeast 2003'** an International Meeting held at the Institute of Microbial Technology (IMTECH), Chandigarh, India, Feb 20-22, 2003.
 7. Poster entitled **"A MFS Antiporter *CaMDR1* of *C. albicans* is a Major drug Transporter"** in the **'BIOSPARKS 2007'** an annual research festival organized by School of Life Sciences, JNU, Feb 24-27.
 8. Oral Presentation on **"*ERG1* affects the Drug susceptibility and Morphogenesis in pathogenic yeast *C. albicans*"** in the **"BIOSPARKS 2005"** an annual research festival held by School of Life sciences, JNU, Feb 14-16.
 9. The abstract was selected for the oral presentation in the **23rd SMYTE** (Small Meeting on Yeast Transport and Energetics), an international meeting held at Manesar, Haryana, Sep 23-26, 2005.
 10. The abstract was selected for the oral presentation in the **7th Yeast Lipid Conference**, May 12-14, 2005 at Swansea, U.K. entitled **"Fluctuation in membrane rafts lipid constituents- affect drug susceptibilities of *C. albicans*"**
 11. The abstract was selected for the oral presentation in the **8th Yeast Lipid Conference**, Torino, Italy, May 10-12, 2007, entitled **"Membrane alterations differentially affect two superfamilies of Membrane Transporters."**
 12. The abstract was selected for the oral presentation entitled **"MFS transporter *CaMDR1* is an antiporter"** at the **24th SYMTE** meeting held in Prague, 2006.
 13. Oral Presentation in National Seminar on "Molecular Technique-The face of Modern Sciences" on Oct 24, 2011 on **"Structure and function analysis of *CaMDr1p*, a MFS antifungal efflux transporter protein of *Candida albicans*: identification of amino acid residues critical for drug/H⁺ transport"** organized by Department of Biochemistry in Maharshi Dayanand University, Rohtak
 14. National Seminar organized by Department of Genetics, on March 20, 2012, on "Recent Advancements in Application of Genetics" in Maharshi Dayanand University, Rohtak.
 15. India-Japan Seminar organized by the Department of Biochemistry, Maharshi Dayanand University, Rohtak on October 30, 2010.
 16. National Seminar on "Internet: Applications in Research" on March 26, 2011, organized by Department of Zoology in Maharshi Dayanand University, Rohtak.
 17. International Research Colloquium on 'Advances in Microbial Biotechnology: Future prospects'(AMBF-2012) organized by Department of Microbiology in Maharshi Dayanand University, Rohtak-124001 Haryana on November 20, 2012.
 18. Attended National Seminar on "Novel Antimicrobials: An Alternative to Clinical Antibiotics" organized by Department of Genetics in Maharshi Dayanand University on Sep 14th, 2013.
 19. DSW sponsored and Pharmacy Department organized one-day workshop "Instrumental Methods in Pharmaceutical Research" on 28-11-13.
 20. Poster Presentation entitled "Curcumin shows synergism with azoles and polyenes against *Aspergillus* infections" in the 18th Annual convention of Society of Pharmacognosy on "Promotion and Globalization of Indian Herbal product- Perspective and Prospects" organized by Department of Pharmaceutical Sciences, Dayanand University, Rohtak, Haryana between Feb 21-22, 2014.
 21. Poster presentation entitled "ABC (ATP Binding Cassette) Multidrug Transporter *Cdr1p* of *Candida albicans* prefer to be within Membrane Rafts" in the conference 'Next Generation Sciences: Vision 2020 & Beyond' organized by Department of Zoology, Maharshi Dayanand University, Rohtak, Haryana on Mar 8, 2014.
 22. Oral presentation on "Site-Directed Mutagenesis (SDM) as a tool to unravel the role of individual amino-acids" in the workshop **'Genomics and Proteomics'** organized by Department of Biochemistry, Maharshi Dayanand University, Rohtak, Haryana between Mar 3-5, 2014.
 23. Attended National Seminar on **"Molecular Pathology of Human Genetic Disease"** organized by Department of Genetics in Maharshi Dayanand University on August 23rd 2014.

24. Attended 3rd International research colloquium on '**Interdisciplinary Scope of Microbiology: Present Status and Future Directions (IRCISM-2015)**' organized by Department of Microbiology in Maharshi Dayanand University on 31st January 2015.
25. National Seminar in 'Innovative Researchers in Life Sciences' by Department of Zoology, Maharshi Dayanand University on Feb 21st, 2015.
26. Poster Presentation in National Conference of Natural Products; Current Innovations & Future Trends organized by Department of Genetics in Maharshi Dayanand University on March 19th, 2015.
27. National Seminar on Today's Vision: Save Ozone, Save earth on Sep 16, 2015, organized by Department of Environmental Sciences in Maharshi Dayanand University and Ministry of Earth Sciences, Govt of India.
28. Attended National Research Colloquium on 'Microbes in Food, Energy, and environment: Its importance and Future Prospect' (MFEE-2016) organized by Department of Microbiology and Association of Microbiologists of India-Rohtak Unit on April 2, 2016.
29. Attended a workshop on "Coping Health Issues" organized by Women Studies Centre on Feb 23, 2017.
30. Oral talk in National Symposium on "Recent trends in Biotechnology and Drug Discovery" from Mar 30-31, 2017 in Department of Biotechnology of Shri Mata Vaishno Devi University, Katra.
31. Poster presentation entitled "**Lipids as Determinants of Drug Resistance in *Candida albicans***" in 28th **International Conference on Yeast Genetics and Molecular Biology (ICYGMB)** in Prague, the Czech Republic with duty from 27.08.2017-1.09.2017.
32. National Conference cum Workshop on "Hand on Training on Chromatographic Techniques" on Dec 12, 2017, organized by Department of Pharmaceutical Sciences in Maharshi Dayanand University.
33. Poster presentation in 10th Conference on Yeast Biology Model Yeasts to Fungal Pathogens on Feb 8-11, 2018 jointly organized by School of Life Sciences, JNU and Amity University, Gurgaon.
34. Participated in a one-day National conference cum Awareness Programme on "Protection of Intellectual Property Rights-Need of the Hour" organized by Department of Pharmaceutical Sciences on May 10, 2018.
35. Participated in one-day user awareness workshop on "User-Centric Content to Empower Knowledge", organized by MDU Rohtak and Elsevier on Sep 4, 2018.
36. Participated in Two days National conference cum workshop on "Recent Trends of CADD in Drug Design & Discovery" organized by Department of Pharmaceutical Sciences, on Nov 2-3, 2018.
37. Participated in National workshop on 'BIOETHICS IN RESEARCH: A NEED OR COMPULSION' organized by Department of Genetics on Nov 15, 2018.
38. Poster presentation in International Conference on Microbial Pathogenesis and New Frontiers' b/w Mar 23-25, 2019 in IMTECH, Chandigarh.
39. Participated in National conference on '**Emerging Infectious Diseases**' organized by Centre of Biotechnology on March 6, 2019.
40. Participated in National seminar on '**Laboratory Animal Experimentation**' organized by Centre of Medical Biotechnology on March 28, 2019.
41. International Seminar on '**Sustainable environment and Agriculture under Global Climate Change-2019**' organized by Department of Environmental Sciences on Feb 21, 2019.
42. Poster Presentation in e-Colloquium on 'Emerging Trends in Health and Diseases Research' held on Oct 20, 2020 at Amity University, Haryana.
43. Poster presentation on 'Mitochondrial Dysfunction from a Novel mechanism in Fungi, affecting Drug Response in the Annual International Conference of the Association of Microbiologists of India and Indian Network for Soil Contamination Research (INSCR) organized between Feb 3-5, 2021.
44. Poster presentation on 'The *Zanthoxylum armatum* fruit's oil exterminates *Candida* Cells by Inhibiting Ergosterol Biosynthesis, without generating Reactive Oxygen Species, in the International Conference "Emerging Trends in Biotechnology and Sustainable Chemistry (ETBSC-2022)" organized between 27-29 April 2022 by Bhatinda University and Baba Farid College.

45. Attended National workshop on Extramural Research Funding: Opportunities & Challenges b/w Oct 14-15, 2022 organised under STRIDE scheme by Maharshi Dayanand University.
46. Poster presentation on "*The Zanthoxylum armatum fruit's oil exterminates Candida cells by inhibiting ergosterol biosynthesis, without generating reactive oxygen species*" in international conference organized by The International Society for Human & Animal Mycology (ISHAM) conference b/w Sep 20-24, 2022 in Ashok Hotel, New Delhi.
47. Attended one day workshop on Curriculum and Credit Framework for Undergraduate Programmes on April 8th, 2023 organised by the Faculty Development Centre (FDC) and Internal Quality Assurance Cell (IQAC)
48. Oral Talk in the International conference on "*Plasma membrane lipids affect the drug resistance in pathogenic fungus Candida albicans*" organized by "Biotechnology and Human Welfare; Vision 2030 and beyond (ICBHW-2023)" organized by Department of Biotechnology, Chaudhary Devi Lal University, Sirsa (Haryana)
49. Attended Yeast India 2023 meeting between Mar 10-13th 2023, organised by Indian Institute of Science education and Research (IISER) Mohali, India.
50. Attended Two days workshop on '**Relevance of IPR in the Era of Innovation Driven Research**' held on Aug 26-27, 2022 and organised by Golden Jubilee Centre for Entrepreneurship and Innovation (GJCEI), Guru Nanak Dev University, Amritsar.
51. Oral Talk on "Phytohormones provide protection against fungal biotic stress" under the theme 'Tolerance to abiotic and biotic stresses and climate resilience 14th International Conference (IFSDAA) on Sustainable Agriculture for Food Security under Climate Change' in Goettingen, Germany b/w September 27-29, 2023
52. Oral Talk on "Lipids and mitochondria are crucial regulators of drug resistance in the pathogenic fungus *Candida albicans*" in International Conference on Current Trends in Biological Sciences (ICCTBS-2024) b/w 18-20 Mar 2024 in Mizoram University.
53. AMI, Hissar

Other duties:-

- Organizing secretary National Seminar on "Molecular Technique-The face of Modern Sciences" on Oct 24, 2011, in Department of Biochemistry in Maharshi Dayanand University, Rohtak.
- Organizing Member, "India-Japan Seminar organized by Department of Biochemistry, Maharshi Dayanand University, Rohtak on October 30, 2010.
- Organizing Member in the workshop 'Genomics and Proteomics' organized by Department of Biochemistry, Maharshi Dayanand University, Rohtak, Haryana between Mar 3-5, 2014.
- Selected and attended 77th **Orientation course** in Academic Staff College (ASC) in Jawaharlal Nehru University (JNU) from 08 Nov - 02 Dec 2011.
- Selected and attended 18th **Refresher course** in Life Sciences in Academic Staff College (ASC) in Jawaharlal Nehru University (JNU) from 07 Jan -01 Feb 2013.
- Selected and attended one week Workshop for on ICT (Including MOOCs, LINUX and FOSS) b/w Nov 11-17, 2014 at UGC Academic Staff College in B.P.S. Mahila Vishwavidyalaya, Khanpur Kalan, Sonapat, Haryana.
- Selected and attended 2nd **Refresher course** in Life Sciences & Biotechnology in Academic Staff College (ASC) in Jawaharlal Nehru University (JNU) from Oct 3-28, 2016.
- Selected and attended one-week **Short-term course on 'Effective Teaching Skills'** in UGC- Human Resource Development Centre (HRDC), Pondicherry University from Jan 3-9, 2019
- Attended one-week **Short-term course on 'Research Methodology and Data Analysis'** organized by FDC, M.D. University from Dec 19-24, 2020.

- Attended one-week **Short-term course on 'Cyber Security: Issues, Challenges and Interventions'** organized by HRDC, GND University from Sep 10-16, 2021.