




Faculty Profile: Prof. Vandana Gupta
Department of Microbiology
Ram Lal Anand College, University of Delhi



Title	DR.	First Name	VANDANA	Last Name	GUPTA	Photograph
Designation		Professor				
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Web-Page		<u>https://www.rlacollege.edu.in/pdf-profile/microbiology/Microbiology_Vandana%20Gupta_jun-2023.docx.pdf</u>				
Google scholar:		<u>https://scholar.google.com/citations?user=dR1O9IEAAA-AJ&hl=en&oi=ao</u>				
Research gate:		<u>https://www.researchgate.net/profile/Vandana-Gupta-10</u>				
ORCID ID		<u>https://orcid.org/0000-0003-4785-5615</u>				
Scopus ID		57207396291				
Researcher Id		AAT-7491-2020				
Vidwan-ID		289034				
Educational Qualifications						
Degree		Institution				Year
Ph.D Microbiology		Department of Microbiology, University of Delhi				1993-1999
M.Sc Microbiology		Department of Microbiology, University of Delhi				1991-1993
B.Sc (Hons) Microbiology		Swami Shraddhanand College, University of Delhi				1988-1991
Post Doctoral fellowship		Genetic Immunotherapy Lab. Division of John Hopkins in Singapore				2002-2005
Career Profile						

1. Professor - since 2020 Department of Microbiology, Ram Lal Anand College, University of Delhi
2. Associate Professor – 2010-2020 Department of Microbiology, Ram Lal Anand College, University of Delhi
3. Reader – 2005-2010 at Department of Microbiology, Ram Lal Anand College, University of Delhi
4. Lecturer in Senior scale – 2001-2005 at Department of Microbiology, Ram Lal Anand
5. Lecturer – 1998-2001 at Department of Microbiology, Ram Lal Anand College, University of Delhi

Administrative Assignments

Current:

Convener: Workload and academic affairs committee

Nodal Officer: Examinations (May 2021, onwards)

Coordinator: Research and IPR cell

Member Secretary: Institutional Ethics Committee

Convener: Department Admission Committee

Member: Solid Waste Management Committee

Coordinator: COVID Task Force

Previous:

Successfully discharged duties as Convener, Co-convener or Member of various committees in the college for last 25 years of service. Worked as Deputy Superintendent of examinations for more than 10 semesters

Community Project: Launched an online social awareness campaign on HPV vaccination “UDISHA: A new dawn” in Feb 2021 as there is little or no awareness regarding the availability of HPV vaccine and the cancers it protects against and who and when to take it.

https://docs.google.com/document/d/15U-O918fgFdnk_Z141n7_Ytstg6vPbt8DQMAoQzNljg/edit?usp=sharing

Areas of Interest / Specialization

1. Currently pursuing research in Bioinformatics with specialization in virtual screening of drugs combined with drug repositioning approach against SARS-CoV-2, HCV, Chikungunya, MRSA, *E coli*, and other ESKAPE pathogens
2. Thoroughly trained in Microbiology with strong theoretical and practical training in all microbiological techniques, cell culture, protein expression and purification, construction of DNA vaccines, validation of vaccines in mouse model, ELISA, ELISPOT, cytotoxicity assays, Baculovirus expression systems, Confocal Microscopy etc.

3. Specialized in research on Ectomycorrhizal Fungi during Ph.D.

Title: “Selection of Ectomycorrhizal Fungi for Large scale Inoculum Production and Their Physiological Characterization” Under the guidance of Prof. T Satyanarayana, Department of Microbiology, University of Delhi. Year of Award: 1999

4. Attained experience in construction and validation of DNA vaccine against SARS virus during Postdoctoral fellowship at Singapore (2002-2005).

Subjects Taught

Immunology, Genetics and Microbial Genetics, Virology, Medical Microbiology, Microbial Ecology, Bioinformatics, Microbial Diversity and Scope of Microbiology

Research Guidance

MSc Dissertations

1. M.Sc BIOTECHNOLOGY dissertation entitled “**Virtual Screening Of Novel Inhibitors Against Methicillin-Resistant *Staphylococcus aureus*: A Drug Repurposing Approach**” by Kritika Seth, Manav Rachna International Institute of Research and Studies, Faridabad (Submitted in July 2019)
2. MSc. Biotechnology dissertation entitled “***E. coli* gyrase, an important target for novel therapeutics: *in silico* drug repurposing approach**” by Rakhi Chandran submitted to the Department of Biotechnology, School of Sciences, Noida International University, Gautam Budh Nagar, Uttar Pradesh (Submitted in July 2020)
3. M. Sc. Microbiology dissertation entitled “**A Molecular docking study targeting SARS-CoV-2 3CLpro: An *In-silico* drug repurposing approach**” by Shubham Sachdeva from the Department of Biosciences, Jamia Millia Islamia, New Delhi (Submitted in June 2021)

Guided three Summer training students of M.Sc Bioinformatics from Maharishi Dayanand University, Rohtak, Haryana

Guiding 10 students of B.Sc (Hons) Microbiology under College Research Grant Scheme and other research projects

Mentored a number of students for their research projects, and scientific writing skills.

Encourage and support students for higher education through counseling and writing recommendations.

Publications Profile

Patent

Patent Granted: No. 418733 “Method of screening inhibitors against Hepatitis C virus” on March 30, 2017 (application no. 201711011516) and complete specification filed in March 2018 (reference no. R20181009113), Date of publication: [05/10/2018](#); Date of Grant : 20 Jan 2023

Publications (communicated):

- i. Lohia G, Gupta S, Gupta V. Cephalosporins: possible antagonists for HCV helicase
- ii. Kaur SP, Gupta V. Identification of SARS-CoV-2 RNA Capping Inhibitors through Molecular Docking: A Drug Repurposing Approach
- iii. An in-silico approach to target multiple proteins involved in anti-microbial resistance using natural compounds produced by wild mushrooms
- iv. Nanoparticles for Cancer Therapy: Current Status, Patents, Challenges and Future Prospects

Published

1. Ahmed Md H, Singh G, M Castrosanto, A Hossain, Md. MI Rifat, S H Rima, V Gupta, RK. Kesharwani, M Jaremko, A-H Emwas, P Alam, and Azam F (2024) A Structure-Based Drug Design Approach for the Identification of Antiviral Compounds Targeting the Chikungunya Virus RdRp Protein, *Chemical Physics Impact*, 2024, 100450, <https://doi.org/10.1016/j.chphi.2023.100450> ISSN 2667-0224
2. Ahmed Md H, Samia NSN, Singh G, **Gupta V**, Mishal MFM, Hossain A, Suman KH, Raza R, Dutta AK, Labony MA, Sultana J, Faysal EH, Alnasse SM, and Azam F (2023). An immunoinformatics approach for annotation of hypothetical proteins and multi-epitope vaccine designed against the Mpox virus. *Journal of Biomolecular Structure and Dynamics* <https://doi.org/10.1080/07391102.2023.2239921> IF 5.1
3. Bhat S, Saha S, Garg T, Sehrawat H, Chopade BA, **Gupta V** (2023). Insights into the challenging multi-country outbreak of Mpox: a comprehensive review. *J Med Microbiol.* 72(6). <https://doi.org/10.1099/jmm.0.001725>. PMID: 37378642. IF 3.2,
4. Gupta I, Baranwal P, Singh G, Gupta V. Mucormycosis, past and present: a comprehensive review [published online ahead of print, 2023 Mar 27]. *Future Microbiol.* 18:217-234. <https://doi.org/10.2217/fmb-2022-0141>. IF 3.55, ISSN: 1746-0913
5. Kapoor, S., Singh, A., & **Gupta, V.** (2023). In silico evaluation of potential intervention against SARS-CoV-2 RNA-dependent RNA polymerase. *Physics and chemistry of the earth* (2002), 129 (2023) 103350, ISSN 1474-7065, <https://doi.org/10.1016/j.pce.2022.103350> IF 3.98
6. Shahanshah MFH, Anvitha D, **Gupta V**. In-silico screening to delineate novel antagonists to SARS-CoV-2 nucleocapsid protein. *Phys Chem Earth* (2002). 2022 Oct;127:103188. doi: 10.1016/j.pce.2022.103188. ISSN: 1474-7065. IF 3.98
7. **Gupta V** (2022). Reply to letter entitled ‘Diagnosis of COVID-19: hemagglutinin-esterase gene is used for molecular assays?’, *Expert Review of Molecular Diagnostics*, Feb 2022; 22:2, 137-137, DOI: 10.1080/14737159.2022.2021369
8. Dwivedi V, Gupta RK, Gupta A, Chaudhary VK, Gupta S, **Gupta V**. “Repurposing Novel Antagonists to p7 Viroporin of HCV Using *in silico* Approach” 2022, *Letters in drug design and*

discovery; 19(11); 969-981. DOI: <https://doi.org/10.2174/1570180819666220124112150> **Online ISSN 1875-628X, IF 1.**

9. Singh G, Soni H, Tandon S, Kumar V, Babu G, **Gupta V**, Chaudhuri (Chattopadhyay) P. Identification of natural DHFR inhibitors in MRSA strains: Structure-based drug design study, Results in Chemistry Vol 4, 2022, 100292, ISSN 2211-7156, <https://doi.org/10.1016/j.rechem.2022.100292>
10. Sharma B, Shahanshah MFH, Gupta S, Gupta V. (2021) Recent advances in the diagnosis of COVID-19: a bird's eye view. Expert Rev Mol Diagn. 21(5):475-491. doi: 10.1080/14737159.2021.1874354. PMID: 33423567, ISSN: 1473-7159, **IF 5.1**
11. Singh A, **Gupta V**. SARS-CoV-2 therapeutics: how far do we stand from a remedy? Pharmacol Rep. 2021 Jan 3:1–19. Epub ahead of print. PMID: 33389724; PMCID: PMC7778692. doi: 10.1007/s43440-020-00204-0. ISSN: 2299-5684, IF 4.4
12. Singh A, Gupta L, **Gupta V**. Heterologous Protection to COVID-19 with BCG Vaccine: Deciphering the Reality Using Meta-Analysis Approach. J Immunological Sci. (2020); 4(4): 34-40. ISSN: 2578-3009, [DOI:10.13140/RG.2.2.19809.74080](https://doi.org/10.13140/RG.2.2.19809.74080)
13. Kaur SP, **Gupta V** (2020) SARS-CoV-2 Vaccine: Reconnoitering the Prospects. Vaccine Res Dev 1(1):1-5. [DOI:10.36959/669/745](https://doi.org/10.36959/669/745)
14. Dwivedi V, Ayyagari A, Chandran R, Diwan P, Gupta S, Gupta V. Repurposing Potential of Diminazene Aceturate as an Inhibitor of the E. coli DNA Gyrase B. J Biomed Res Environ Sci. 2020 Oct 31; 1(6): 263- 270. doi: 10.37871/jbres1153, Article ID: JBRES1153; ISSN 2766-2276
15. Chandran R, Ayyagari A, Diwan P, Gupta S, Gupta V. *In silico* Screening of Approved Drugs to Describe Novel E. coli DNA Gyrase A Antagonists. J Biomed Res Environ Sci. 2020 Oct 26; 1(6): 233-240. doi: [10.37871/jbres1148](https://doi.org/10.37871/jbres1148), Article ID: JBRES1148; ISSN 2766-2276
16. Kaur SP, **Gupta V**. COVID-19 Vaccine: A comprehensive status report. Virus Res. 2020 Oct 15;288:198114. doi: 10.1016/j.virusres.2020.198114. Epub 2020 Aug 13. PMID: 32800805; PMCID: PMC7423510. ISSN: 0168-1702, Impact factor 3.3, **UGC care and SCOPUS listed**
17. Dashora V, Singh A, Chaudhary Y, Kaur S, Nain VK, John S, Sharma SK, Gupta V, Gupta RK. Impact of Sanitary Landfills on Microbiological Activity and Water Quality Index of Groundwater in Delhi, India. Sambodhi 43:04 (IV) July-September (2020), (UGC Care Journal) ISSN: 2249-6661 impact factor –not known
18. Nandi I, Gupta A, Chaudhary VK, **Gupta V**, Gabrani R, Gupta S, “Expression, purification and functional characterization of recombinant hypervariable region (HVR) of Chikungunya virus nsP3 protein” **3 Biotech**, 2019 27 May; 9(6):235 () **2190-572X / 2190-5738; UGC care and SCOPUS listed** <https://doi.org/10.1007/s13205-019-1759-8>, IF: 3.1
19. Agarwal G, Gupta S, Gabrani R, Gupta A, Chaudhary VK, **Gupta V**, “Virtual screening of inhibitors against Envelope glycoprotein of Chikungunya Virus: a drug repositioning approach”

Bioinformation 2019 Jun; 15(6): 439-447. doi: 10.6026/97320630015439 ISSN 0973-2063 (online) **UGC care listed. IF 1.9**

20. Ghildiyal R, Gupta S, Gabrani R, Joshi G, Gupta A, Chaudhary VK, **Gupta V** (2019) Chikungunya Polymerase: A Potential Target for Inhibitors- in Silico Study” **VirusDisease** 2019 Sep; 30(3): pp 394–402 doi: [10.1007/s13337-019-00547-0](https://doi.org/10.1007/s13337-019-00547-0) IF: 0.5, **UGC care and SCOPUS listed ISSN: 2347-3517,**
21. Kaur J., Kaur S., Dashora V., Chaudhary Y., Nijhawan P., Saini S., Dabas M., Sharma K., Aggarwal R., **Gupta V.**, Singh R., Pande P., Sharma S.K., John S., GuptaRK. Microbiological and Physico-Chemical Quality of Groundwater at a Resettlement Colony, Madanpur Khadar in Delhi, India. *DU Journal of Undergraduate Research and Innovation* Volume 1, Issue 3 pp 26-38, Aug 2015 (**ISSN: ISSN 2395 – 2334**)
22. Rajasekharan, S., Rana, J., Gulati, S., **Gupta,V.**, Gupta, S., Neuroinvasion by Chandipura virus, *Acta Tropica* (2014) 135:122-126, <http://dx.doi.org/10.1016/j.actatropica.2014.03.028> (impact factor: 2.8) **UGC care and SCOPUS listed ISSN: 0001-706X**
23. Rajasekharan S, Rana J, Gulati S, Sharma S K, **Gupta V** & Gupta S (2013). Predicting the host protein interactors of Chandipura virus using a structural similarity–based approach. (ISSN 2049-632X) *Pathogens and Disease*, 69(1):29-35. doi: 10.1111/2049-632X.12064. (impact factor: 2.4) **UGC care and SCOPUS listed**
24. Sarethy, I.P., Saxena, Y., Kapoor, A., Sharma, M., Sharma, S.K., **Gupta, V.**, and Gupta S (2011). “Alkaliphilic Bacteria: Applications In Industrial Biotechnology”. *Journal of Industrial Microbiology & Biotechnology*. 38 (7), 769-790, [Indexed in SCOPUS, Impact factor: 2.4] **UGC care and SCOPUS listed; Print ISSN 1367-5435**
25. **Gupta V**, Tabiin TM, Sun K, Chandrashekar A, Anwar A, Yang K, Chikhlikar P, Salmon J, Brusica V, Marques ETA, Kellathur SN, August TJ (2006). **SARS coronavirus nucleocapsid immunodominant T-cell epitope cluster is common to both exogenous recombinant and endogenous DNA-encoded immunogens.** *Virology* 347(1):127-39. doi: 10.1016/j.virol.2005.11.042 IF: 3.616 **UGC care and SCOPUS listed; ISSN. 0042-6822**
26. Sun K, Anwar A, **Gupta V**, Tabiin MT, Atkinson R, Chandrasekarn A, August TJ. SARS coronavirus nucleocapsid protein (NP) gene, complete cds, May 2003, Accession ID AY307165, Source Genbank License Genbank TOS
27. **GuptaV**, Satyanarayana T (2002). Secretion of siderophores by ectomycorrhizal fungi and their likely role in iron nutrition of plant. *Ind. J. Microbiol.* 42; 107-110 (impact factor: 1.8); **ISSN: 0973-7715**
28. Garg, S., Gupta, V. and Satyanarayana, T. 1998. Biofertilizer for multipurpose tree species. *Proc. Natl. Symp.* (Karad, Dec. 28-29, 1997), 72-82.
29. Garg S, **Gupta V** and Satyanarayana T (1995). Submerged cultivation of Ectomycorrhizal fungus *Laccaria laccata*. *Proceedings of the IIIrd Asian conference on Mycorrhiza.* (ed. Adholeya, A. and Singh, S.) pp. 500-505.

30. **Gupta V**, Garg S and Satyanarayana T (1994). Selection of suitable Ectomycorrhizal strain for large scale inoculum production. proceedings of the 'National Symposium on Frontiers in Microbial Technology' (Ed. S.M. Reddy) pp. 53-59, Scientific publishers, Jodhpur, India.

Chapters under publication:

1. Mohan L, **Gupta V (submitted in June 2020)** **An Overview of Mycorrhizae, Nature's Own Biofertilizers** in *Industrial Applications of Soil Microbes*: Eds. *Neeraj Verma, Shampri Jain and Ashutosh Gupta*, Bentham Science Publishers
2. **Recent Advances in the use of Microbial Secondary Metabolites as Bio-stimulants and Bio-protectants in Sustainable Agriculture** In "*Industrial Applications of Microbial Secondary Metabolites-Diversity, Classification and sources*" (the "Work"), edited by Neeraj Verma and Deepak Mishra to be published by Taylor and Francis, USA
3. **Algal Secondary Metabolites: An Overview** In "*Industrial Applications of Microbial Secondary Metabolites-Diversity, Classification and sources*" (the "Work"), edited by Neeraj Verma and Deepak Mishra to be published by Taylor and Francis, USA
4. **Microbial Secondary Metabolites and Recent Advances in Nanomicrotechnology** In "*Industrial Applications of Microbial Secondary Metabolites-Diversity, Classification and sources*" (the "Work"), edited by Neeraj Verma and Deepak Mishra to be published by Taylor and Francis, USA
5. **Secondary Metabolites from Microorganisms: A Boost to the Textile Industry** In "*Industrial Applications of Microbial Secondary Metabolites-Diversity, Classification and sources*" (the "Work"), edited by Neeraj Verma and Deepak Mishra to be published by Taylor and Francis, USA
- 6.

Chapters in books and e-chapters (Published)

1. Shreya Kapoor, Nidhi Verma, Harsh Charak, Kaushiki Dutta, Aishani Gupta, and Vandana Gupta, *Flexible Fungal Materials: An Industrial Perspective 2024*; in *Microbial Approaches for Sustainable Green Technologies*, ed. J. Shankar, Chapter 8, 154-175, Taylor and Francis publications; DOI: 10.1201/9781003407683-8
2. Sandeep Patra, Nidhi Verma, Sneha Priya, Aishani Gupta, and Vandana Gupta, *Microbes as Biocontrol Agents for Sustainable Development 2024*, in *Microbial Approaches for Sustainable Green Technologies*, ed. J. Shankar, Chapter 10, 196-218, Taylor and Francis DOI: 10.1201/9781003407683-10
3. Sharma B, Sehrawat H and Gupta V (2024) *Advances in regenerative medicines based on mesenchymal stem cell secretome* in "Computational Biology for Stem Cell Research" ed by Raghav Pawan, Chapter 14, Pages 175-185, ISBN 9780443132223, <https://doi.org/10.1016/B978-0-443-13222-3.00008-3>. Elsevier, Academic Press,
4. D Anvitha, Raina S, Chhabra L, Singh G and Gupta V (2024). *Overview of the genome editing in rice and its implications* in *CRISPR-Cas System in Translational Biotechnology* ed. Swati

- Joshi, Digvijay Verma, Ravi Kr Gupta. Chapter 13, pg 221-235, DOI: <https://doi.org/10.1016/B978-0-323-91808-4.00007-9> Elsevier, ISBN: 978-0-323-91808-4
5. Hooda S, George AJ, Sharma V, **Gupta V.** " **Mycotoxins: Detection Methods and Strategies for Management**" (2023 April) Chapter 19, pgs 509-530; Book entitled "Fungal Resources for Sustainable Economy" ed Singh I et al. 2023 Publisher Springer International DOI: <https://doi.org/10.1007/978-981-19-9103-5>. ISBN 978-981-19-9105-9
 6. Singh A, Kaur SP, Shahanshah MFH, Sharma B, Chaudhary VK, Gupta S, **Gupta V.** " **COVID-19 Vaccination**" (2023 Jan) Chapter 22; in the textbook 'Coronavirus Disease 2019 (COVID-19): A Clinical Guide' ed. **Ali Gholamrezanezhad**, Pgs 472-493; publisher Wiley-USA. ISBN: 978-1-119-78973-4, <https://doi.org/10.1002/9781119789741.ch22>
 7. Kaur SP, Srivastava T, Sharma A, Gupta S, Chandra NS, **Gupta V.** 2023. Industrial applications of soil microbes: Production of enzymes, organic acids, and biopigments *in* Industrial Applications of Soil Microbes: Volume 2, Chapter 4, pgs 56-84, Eds. *Neeraj Verma, Shampi Jain and Ashutosh Gupta*, Bentham Science Publishers
 8. Singh A, Bhatia P, Kapoor S, Kaur SP, Gupta S, Chandra NS, **Gupta V.**2023. Role of Soil Microbes in the Sustainable Development: Agriculture, Recovery of Metals and Biofuel Production *in* Industrial Applications of Soil Microbes Volume 2, chapter 3, pgs 26-54 Eds. *Neeraj Verma, Shampi Jain and Ashutosh Gupta*, Bentham Science Publishers;
 9. Jain, S., George, A.J., Sharma, V., Singh, G., **Gupta, V.** (2022). Messenger RNA Therapeutics: Start of a New Era in Medicine.(Chapter 3)In: Jurga, S., Barciszewski, J. (eds) Messenger RNA Therapeutics. RNA Technologies, vol 13. pgs 41-71; Springer, Cham. https://doi.org/10.1007/978-3-031-08415-7_3, Print ISBN 978-3-031-08414-0.
 10. Singh A, Kapoor S, Bhatia P, Gupta S, Chandra NS, **Gupta V.** 2022. Role of Soil Microbes in the Sustainable Development: Nutrient Transformation, Bioremediation and Biodeterioration *in* Industrial Applications of Soil Microbes Vol 1: Eds. *Neeraj Verma, Shampi Jain and Ashutosh Gupta*, Pgs:151-179; Bentham Science Publishers ;ISBN: 978-981-5039-96-2 (Print); ISBN: 978-981-5039-95-5 (Online) DOI:[10.2174/97898150399551220101](https://doi.org/10.2174/97898150399551220101)
 11. Shahanshah M F H, Sehrawat H, Wijewardana C, Pal S, Gupta A, Diwan P, Gupta S, **Gupta V.** 2021, "Recent Advances in Chikungunya Virus Therapeutics: An Overview", **In** Chikungunya Virus: Epidemiology, Transmission and Therapeutics ed Phillip Galvan, **pg 57-82**, Nova Science Publishers, Inc. USA
 12. Sehrawat H, Shahanshah MFH, Wijewardana C, Pal S, Chaudhary VK, Gupta S, **Gupta V.** "Recent Progress on Immunotherapy and Immunoprophylaxis of Chikungunya Virus" ", **In** Chikungunya Virus: Epidemiology, Transmission and Therapeutics ed Phillip Galvan, **pg 83-119**, Nova Science Publishers, Inc. USA
 13. Ghildiyal R., Prakash V., Chaudhary V.K., **Gupta V.**, Gabrani R. (2020) Phytochemicals as Antiviral Agents: pp 279-295 Recent Updates. In: Swamy M. (eds) Plant-derived Bioactives.

Springer, Singapore, http://doi.org/10.1007/978-981-15-1761-7_12, **Print** ISBN 978-981-15-1760, **Online** ISBN 978-981-15-1761-7,

14. **Gupta V**, Sarethy IP, Gupta S. General characteristics of different types of Acellular Microorganisms. for virtual Learning centre, Delhi University for the undergraduate program (2015) ISSN No. 2349-154X
15. **Gupta V**, Sarethy IP, Gupta S. General characteristics of different types of Cellular Microorganisms. for virtual Learning centre, Delhi University for the undergraduate program (2015) ISSN No. 2349-154X
16. Gupta S, **Gupta V**, Aggarwal S, Diwan P. Bacteria and their cell organisation. for virtual Learning centre, Delhi University for the undergraduate program (2015) ISSN No. 2349-154X
17. **Gupta V**, Aggarwal S, Diwan P, Gupta S. Bacterial cell envelop. for virtual Learning centre, Delhi University for the undergraduate program (2015) ISSN No. 2349-154X
18. Sarethy IP, Gupta S, **Gupta V**. **Bacterial Systematics**. for virtual Learning centre, Delhi University for the undergraduate program (2015) ISSN No. 2349-154X
19. **Gupta V** and Gupta S (2008). Diversity of Microbial World, **National Science Digital Library**. **Link** : <http://nsdl.niscare.res.in/handle/123456789/137>.
20. Gupta, V., Kumar S. and Satyanarayana, T. 2002. Heavy metal tolerance of ectomycorrhizal fungi and utility of metal tolerant EM fungal strains in reclaiming wastelands created by mining operations. In Bioinoculants for sustainable agriculture and forestry (eds. S.M. Reddy, S.R. Reddy, M.A.S. Chary and S. Girisham), Scientific Publ., Jodhpur, pp. 27-36.
21. **Gupta V**, Satyanarayana T and Garg S (2000). General aspects of mycorrhiza. In 'Mycorrhizal Biology'. (ed. Mukerji, K.G., B.P. Chamola and Jagjit Singh), 'Kluwer Academic/Plenum Publishers', New York, Boston, Dordrecht, London, Moscow. Pp.27-44.
22. **Gupta V** and Satyanarayana T (2000). Molecular Genetics of Ectomycorrhizal Fungi. In 'Mycorrhizal Biology'. (ed. Mukerji, K.G., B.P. Chamola and Jagjit Singh), 'Kluwer Academic/Plenum Publishers', New York, Boston, Dordrecht, London, Moscow. Pp.119-134.
23. **Gupta V** and Satyanarayana T (1996). Molecular and general Genetics of Ectomycorrhizal fungi. In 'Concepts in Mycorrhizal Research' (ed. Mukerji, K.G.) pp. 343-361, Kluwer Academic Publishers', Netherlands.
24. Satyanarayana T, **Gupta V** and Garg S (1996). Ectomycorrhizal fungi as experimental Organisms. In 'Concepts in Mycorrhizal Research' (ed. Mukerji, K.G.) Kluwer Academic Publishers', Netherlands, pp-333-346.

25. Satyanarayana T, **Gupta V** and Garg S (1994). Problems and prospects in the inoculum production technology of ectomycorrhizal fungi. In Fungal Biotechnology ed. Prakash, A. pp. 41-46.

Conference Organization/ Presentations (in the last three years)

Events Organized

1. Coordinated one week FDP on “ Essential Skills for Genomics” from 4-11 Aug 2023 in Collaboration with Delhi School of Skill Enhancement and Entrepreneurship Development (IoC-DSSEED), Centre for Innovation in Infectious Disease Research, Education and Training (CIIDRET), GAD-TLC, SGTB Khalsa College, Ram Lal Anand College, University of Delhi.
- 2.
3. Seminar on Financial independence by Mr. Raghuveer Yadav, vice president, International Institute of Venture Capital, private equity, mergers and acquisitions on 24 Mar 2023.
4. Webinar “Intellectual property rights: a plethora of opportunities” on 17 Feb 2023, Speaker Ms. Purna Vij, Patent paralegal (Borden Ladner Gervais LLP, Vancouver, Canada)
5. Health Camp (in collaboration with Action Cancer Hospital) on 10 Jan 2023, more than 100 participants
6. One week national workshop on “Hands-on workshop on basic techniques in Microbiology”, in collaboration with CIIDRET and DSEED under 100 days Training and skill enhancement festival from 17-23 Dec 2022.
7. Seminar on cancer awareness (in collaboration with Action Cancer Hospital) on 10 Jan 2023 “Prevention and early detection of cancer” by Dr. Rakesh Jain, senior consultant, surgical oncology and “Common Gynaecological Problem-awareness and perception regarding Breast and cervical cancer” by Dr. Shruti Bhatia senior consultant, Gynae oncology, Action Cancer Hospital (75 participants)
8. Self-defense workshop for girls (in collaboration with Delhi Police) 10-14 Oct 2022 (25 participants).
9. Seminar (equity day) “Labor laws and Importance of being financially independent” on 29 Aug 2022 speakers Mrs. Nandita Krishan (Labor laws-Know your laws), General Manager, Marching sheep and Mrs. Aakansha Bhargava (Importance of being self-dependent in a society that teaches dependency) , CEO, PM relocations Pvt Ltd. (70 participants)
10. Seminar on “Intellectual Property rights in biological Sciences: A Kaleidoscope of Opportunities” by Dr. Chitra Arvind on 7 Apr 2022
11. Webinar on “Why, what and how of IPR and patents” by Ms. Latika Khanduja (patent attorney) on 3 Sep 2021.

12. Poster making competition on “Gender equality for a sustainable tomorrow” on 10 Mar 2022.
13. ‘Open mic’ event for students to express their gratitude to the women in their life in the form of poem/stand-up act/song/story was held on the occasion of Women’s day, 8 Mar 2022.
14. Webinar “Mental health” organized on 30 Jan 2022,. The speaker for the webinar was Capt (Dr) Sunaina Singh.
15. Workshop on “Self-defense training for girls” in collaboration with the Delhi Police was organized from 28 Feb-7 Mar 2022
16. Webinar “Be cancer aware”, organized on 29 Oct 2021. The guest speaker was Dr. Shubha Sinha
17. Online Cartoon/Collage/Slogan/Poster making competition was organised on “Role of women in Indian independence” on 15 Aug 2021.
18. **MIKROVITAE 2021**, the annual department fest of Mikrobiologika, on 3rd April 2021, Ram Lal Anand College, University of Delhi, New Delhi 110021 (google meet)
19. Poster making competition on “**Latest Developments in SARS-CoV-2 Research: Prophylaxis/Therapeutics/Diagnostics**” Jan 2021. Ram Lal Anand College, University of Delhi, New Delhi 110021 (online poster submission)
20. "Be Cancer aware" by DR. Ak Dewan (Rajeev Gandhi Cancer Institute), 22 March 2021, Ram Lal Anand College, University of Delhi, New Delhi 110021 (zoom meet)
21. 2 days DBT Sponsored National Workshop on MOLECULAR DOCKING IN DRUG DESIGN, 31Mar-1 Apr 2021, Ram Lal Anand College, University of Delhi, New Delhi 110021 (zoom meet)
22. 40 hours online certificate course on "Python in Biological Sciences” 16th January 2021 to 11th April 2021, Ram Lal Anand College, University of Delhi, New Delhi 110021 (google meet)
23. 4 weeks online certificate course for students entitled “Scientific writing and Research Ethics” 13th July 2020 to 7th August 2020, Ram Lal Anand College, University of Delhi, New Delhi 110021 (google meet)
24. One week FACULTY DEVELOPMENT PROGRAMME entitled “Biosafety, Bioethics and IPR” 24th -28th August 2020, Ram Lal Anand College, University of Delhi, New Delhi 110021 (google meet)
25. Alumni Lecture “Polarity Establishment in Zebra Fish” by Dr. Prateek Arora on July 3, 2020.
26. Organizing Secretary: Webinar on Advantage IPR, an overview and implications in your field, 2nd May, 2020 webinar

27. Organizing Secretary: International Seminar on “Nanoparticles in Biology” 29th Jan, 2020 at Ram Lal Anand College, University of Delhi, New Delhi 110021
28. Organizing Secretary: One Day National Seminar on “Meta-genomics and Genome Editing' 5th February 2020 organized under Department of Microbiology, Ram Lal Anand College
29. Organizing Secretary: Microvitae (Festival of Department of Microbiology) 4th February 2020, with keynote lecture on “Synthetic Biology: from concept to applications” , Ram Lal Anand College
30. Organizing secretary: Three alumni interaction sessions under Alumni Lecture series (2019-2020).
 - i. 31-10-2019: Dr. Chandra Prakash (batch 1997-2000, now Associate Professor, Department of Medical Oncology, AIIMS, New Delhi).
 - ii. 11-11-2019: Dr. Piyush Agrawal (batch 2008-2011, now Postdoctoral Fellow, National Cancer Institute, NIH, USA) talked on “Career options and research opportunities in the field of bioinformatics”.
 - iii. 22-01-2020: Mr. Abhilash Chakraverty (batch 1997-2000), a business leader and author talked on “Career choices from RLA into Management, Corporate Research and Entrepreneurship” on.
31. Organizing Secretary: Workshop on “Intellectual Property Rights (IPR) and Entrepreneurship: How to kick start your start-up” 30 March, 2019.
32. Organizing secretary: Faculty development program on “Writing Research Proposals and Addressing IPR related Issues” from 29-30 March, 2019
33. Organised two days Faculty Development Programme from 29 to 30 March, 2019 On “Writing Research Proposals and Addressing IPR Related Issues”
34. Organised One day workshop for Students on “Entrepreneurship: How to kick start your startup” on March 30, 2019
35. Organised One day National seminar on Probiotics: Ameliorating the burden of lifestyle disorders” held on 1st Feb, 2019
36. Organized one day program with lectures on “Metagenomics”, “Role of Bioinformatics in Modern Biology”, and “Microbiology Poised for next leap: Genomics, Informatics and Automation”, on 10th Feb, 2016.

Invited Talks:

1. Resource person: One week national workshop on “Hands-on workshop on basic techniques in Microbiology”, in collaboration with CIIDRET and DSEED under 100 days Training and skill enhancement festival from 17-23 Dec 2022.
2. Invited talk on “GROWTH AND SUSTAINABILITY: OUR INNOVATIONS” in National Seminar on “Vishwa Guru Bharat: Use of Indian Knowledge in Developing Interventions and Innovations for Contemporary World from 13-14 December 2022. Organized by Aryabhata College, University of Delhi in association with Bharatiya Shikshan Mandal, Delhi Prant and ICSSR
3. Invited talk on ""SARS-CoV-2 proteases: exploring their suitability as targets for novel therapeutics"" in the **International e-workshop on Exploring resources for COVID-19 Research**" held from July 26th - July 31, 2021.
4. Resource Person: “Ghost writing and Determining Authorship “ certificate course July-Aug 2020
5. Invited talk on “Drug repurposing and applications of Bioinformatics tools in drug discovery” Conference on Translational (Engineering) and Regenerative Medicine (CoTERM 2020), organized by Department of Biotechnology and Microbiology, Noida International University, Gautam Buddha Nagar (21-23 Jan 2020)
6. Resource Person: Webinar 30th April, 2020 entitled “ Molecular Docking: A Powerful Tool for Research at College Level” organized by Department of Microbiology, Ram Lal Anand College, University of Delhi
7. Invited Talk on “Bioinformatics in Drug Discovery: HCV a case study” on the occasion of Golden Jubilee Celebration of Swami Shraddha Nand College, Department of Microbiology on 4 March 2017.

Presentations: International

1. Shreyas Bhat, Rakshita Yadav, Bhawna Sharma, Swati Mishra, Vandana Gupta (2024). Immunotherapy of Cancers and Infectious Diseases through Nanovaccines: Problems and Prospects in the 3rd International Conference on Recent Advances in Biotechnology and Nanobiotechnology (Int-BIONANO-2024) during 5-6 March 2024 (**Oral Presentation**)

Oral presentations in Virtual “International Conference on Covid-19” organized by the Great Zimbabwe University on the 29th - 30th of July 2021

2. Sharma V, George AJ, **Gupta V**. A Molecular Docking Analysis of Non-Structural Protein 13 of SARS-CoV-2
3. Shahanshah MFH, D. Anvitha, **Gupta V**. In-silico Screening to Delineate Novel Antagonist to SARS-CoV-2 Nucleocapsid Protein
4. Banerjee S and Gupta V. M Protein of SARS-CoV-2: A Potential Drug Target

5. Srivastava T, Kaur SP, **Gupta V**. Identification of SARS-CoV-2 RNA Capping Inhibitors using Computational Molecular Docking Studies Based Virtual Screening: A Drug Repurposing Approach
6. Kapoor S, Singh A, **Gupta V**. In-silico evaluation of potential intervention against SARS-CoV-2 RNA-dependent RNA Polymerase
7. Sehrawat H, Pal S, **Gupta V**. In-silico analysis to discover SARS-CoV-2 Nsp7-8 inhibitors
8. Wijewardana C, **Gupta V**. Investigation into potential inhibitors of SARS CoV-2 NSP9 : A molecular docking study
9. Bhatia P and **Gupta V**. Computational Identification of SARS-CoV-2 Nsp3 Antagonists.
10. Sachdeva S and **Gupta V**. Molecular docking study targeting SARS- CoV-2 3CL_{pro}: An In-silico drug repurposing approach
11. Sachdeva S and **Gupta V**. Phytochemicals as SARS-CoV-2 M_{pro} inhibitors
12. Sharma B and **Gupta V**. Virtual screening of approved drugs using SARS-CoV-2 Nsp1 as target
13. Baranwal P, Shahanshah MFH, **Gupta V**. Potential Antivirals targeting Spike Glycoprotein of SARS-CoV-2
14. Gandhi P, Sahu S, Lohia GK, Dwivedi V, Pratibha, Kaur K, Rajat, Niladari, Godhara SK, Diwan P, Gupta RK, Gupta S, **Gupta V** (2019) Structure based virtual screening of novel inhibitors against non-structural protein NS5B of Hepatitis C virus at International conference on Biosciences and Biotechnology held at Jaypee Institute of Information Technology, Noida from 31st – 2nd Feb, 2019 (Poster presentation)
13. Agarwal G., Verma V., Gupta S., **Gupta V.**, Gabrani R., Gupta A., Chaudhary V. K.,“ Purification of domains of Chikungunya virus envelope protein” in proceedings of International Conference on Advances in Biosciences and Biotechnology (ICABB) JIIT, Noida, Asian Journal of Pharmaceutical and Clinical Research, vol. 12:2, pp.156, Feb 1-3, 2019 (Poster presentation)
14. Ghildiyal R., Gupta S., **Gupta V.**, Gupta A., Chaudhary V.K., Gabrani R.,“Identification of host interactors of Chikungunya virus non-structural protein 1” in proceedings of International Conference on Advances in Biosciences and Biotechnology (ICABB) JIIT, Noida, Asian Journal of Pharmaceutical and Clinical Research, vol. 12:2, pp.71, Feb 1-3, 2019 (Oral presentation)
15. Agarwal G, **Gupta V**, Gabrani R, Gupta A, Chaudhary VK, Gupta S (2018). **Virtual Screening of Chikungunya Virus Envelop Glycoprotein Inhibitors** at International Conference on Advances in Biosciences and Biotechnology (ICABB-2018)” organized by Department of Biotechnology, Jaypee Institute of Information Technology, Noida from 1st -3rd Feb, 2018 (**oral presentation**)
16. Nandi I, Gabrani R, Gupta A, Chaudhary VK, **Gupta V**, Gupta S (2018). **Expression, Purification and Functional Characterization of Recombinant Hyper Variable Region**

(HVR) of Chikungunya Virus NSP3 Protein at International Conference on Advances in Biosciences and Biotechnology (ICABB-2018)” organized by Department of Biotechnology, Jaypee Institute of Information Technology, Noida from 1st -3rd Feb, 2018 (**oral presentation**)

17. Ghildiyal R, **Gupta V**, Gabrani R, Gupta A, Chaudhary VK, Gupta S (2018). **Chikungunya Polymerase: A Potential Targets for Inhibitors- in silico Study** at International Conference on Advances in Biosciences and Biotechnology (ICABB-2018)” organized by Department of Biotechnology, Jaypee Institute of Information Technology, Noida from 1st -3rd Feb, 2018
18. Rana J, Rajsekharan S, Nandi I, Gupta A, Chaudhary VK, **Gupta V**, Gupta S (2018). **Analysis of Aedes aegypti Interactome Mediated by Arboviruses** at International Conference on Advances in Biosciences and Biotechnology (ICABB-2018)” organized by Department of Biotechnology, Jaypee Institute of Information Technology, Noida from 1st -3rd Feb, 2018
19. Lohia G, Diwedi V and **Gupta V**. (2015). “In silico screening for inhibitors of nonstructural Protein 3 (NS3) of Hepatitis C Virus: a potential target for therapy” at International conference on “Antimicrobial Resistance, Novel Drug Discovery and Development: Challenges and Opportunities” organized by SRM University Haryana from March 2-3, 2015.
20. Sahu S, Gandhi P, Diwan P, Gupta RK, Gupta S , **Gupta V** (2015). Drug Repurposing: Virtual Screening of Inhibitors for NS2 Protease of HCV. Poster no. BIMG16 at 56th Annual Conference of Association of Microbiologists of India (AMI-2015) & International Symposium on “Emerging Discoveries in Microbiology” held from 8th to 10th Dec. 2015 at JNU.
21. Chaudhary Y, Kaur S, Dashora V, Kaur J, Nijhawan P, **Gupta V**, Pande P, Sharma S, John S, Gupta RK. Microbiological Quality of Groundwater and Associated Factors at A Resettlement Colony, Madanpur Khadar in Delhi, India. Poster no. EMP81 at 56th Annual Conference of Association of Microbiologists of India (AMI-2015) & International Symposium on “Emerging Discoveries in Microbiology” held from 8th to 10th Dec. 2015 at JNU.
22. Kaur S, Chaudhary Y, Dashora V, Kaur J, Nijhawan P, **Gupta V**, Pande P, Sharma S, John S, Gupta RK. Assessment of Microbiological and Hydrogeochemical Quality of Groundwater in South West Zone of Delhi and adjoining areas. Poster no. EMP102 at 56th Annual Conference of Association of Microbiologists of India (AMI-2015) & International Symposium on “Emerging Discoveries in Microbiology” held from 8th to 10th Dec. 2015 at JNU.
23. Dashora V , Singh A , Nain VK, Chaudhary Y, Kaur S , **Gupta V** , Pande P, Sharma S, John S , Gupta RK. Impact of Sanitary Landfills on Microbiological Activity and Water Quality Index of Groundwater in Delhi, India. Poster no. EMP107 at 56th Annual Conference of Association of Microbiologists of India (AMI-2015) & International Symposium on “Emerging Discoveries in Microbiology” held from 8th to 10th Dec. 2015 at JNU.
24. **Gupta V**, Tabiin TM, Sun K, Chandrashekar A, Anwar A, Kellathur SN, August TJ (2004). LAMP targeted SARS coronavirus DNA vaccine. 8th National University of Singapore-National University Hospital (NUS-NUH) Annual scientific Meeting, Oct. 2004.
25. Sun K, Yang K¹, Anwar A, Chandrasekaran A, **Gupta V**, Tabiin TM, August TJ. DNA Vaccine Targeting bcr-abl to Both MHC I and MHC II Antigen Presentation Pathway Induces an Enhanced

Protective Immunity Against Chronic Myeloid Leukemia. 8th NUS-NUH Annual scientific Meeting, Oct. 2004.

26. Chandrasekaran, A., Anwar, A., Kai, S., Tabiin, M.T., **Gupta, V.**, Atkinson, R. and August J.T. (2003) Trafficking of severe acute respiratory coronavirus (SARS-coV)-LAMP antigens to MHC II compartments of a SARS coV DNA vaccine. 7th NUS-NUH Annual scientific Meeting, Oct. 2003.

Presentations: National

1. Dwivedi V, Lohia G. Godara SK, Gandotra V, Gupta RK, Gupta S, Gupta D, **Gupta V.** (2015), Viroporin p7 of HCV: potential target for novel therapeutics. 10th Symposium on “Frontiers in Biomedical Research” organized by Dr. BR Ambedkar Centre for Biomedical Research, University of Delhi, 29th to 31st October 2015.
2. DU Innovative Project “Inhibitors against HCV: delineated by in Silico screening” presented at Antardhvani –Feb, 2015, Organized by University of Delhi, Delhi.
3. DU Innovative Project “Virtual Screening of Inhibitors against HCV” presented at Antardhvani – Feb, 2014, Organized by University of Delhi, Delhi.
4. DU Innovative Project “Delineation of Groundwater Potential and Potable Quality in and around South Campus (University of Delhi) Ridge Area” presented at Antardhvani -2013, 22-24th February, Organized by University of Delhi, Delhi.
5. **GuptaV**, SatyanarayanaT, and Garg S (1995). Heavy metal tolerance in Ectomycorrhizal fungi. 36th Annual Conference of the Association of Microbiologist of India, Nov. 8-10, Hisar, Haryana, India, pp.235.
6. **GuptaV**, and SatyanarayanaT (1996). Production of extracellular enzymes by ectomycorrhizal fungi. ‘National Symposium of fungal Biotechnology’. Osmania University, Hyderabad, India.
7. **Gupta V**, Garg S and Satyanarayana T (1994), Ectomycorrhizal Fungi (poster no. IM50) at 34th conference of AMI at Punjab Agriculture University, Ludhiana.
8. **GuptaV**, Garg S, and Satyanarayana T. (1994). Selection of suitable Ectomycorrhizal strain for large scale inoculum production. ‘National Symposium on the Frontiers in Microbial Technology’ held at Warangal, A.P., India
- 9.

Internships conducted:

1. Scientific writing and communications: June –Sep 2023 Book Chapter “Algal Secondary Metabolites: An Overview. Students: Sakshi Verma, Sneha Priya, Aishani Gupta” **submitted** to “**Industrial Applications of Microbial Secondary Metabolites-Diversity, Classification and Sources**” [Editors: Neeraj Verma and Deepak Mishra]. CRC press

2. Scientific writing and communications: June –Sep 2023 Book Chapter “Recent Advances in the use of Microbial Secondary Metabolites as Bio-stimulants and Bio-protectants in Sustainable Agriculture Meet Makwana, Shreya Kapoor **submitted** to and "**Industrial Applications of Microbial Secondary Metabolites-Biotechnological and Commercial Applications**" [Editors: **Neeraj Verma and Deepak Mishra**]. CRC press
3. Scientific writing and communications: June –Sep 2023, Book Chapter Microbial Secondary Metabolites And Recent Advances In Nanomicrotechnology. Students: Shelja Agarwal, Sneh Priya; **Submitted** to and "**Industrial Applications of Microbial Secondary Metabolites-Biotechnological and Commercial Applications**" [Editors: **Neeraj Verma and Deepak Mishra**]. CRC press
4. Scientific writing and communications: June –Sep 2023 Book Chapter: Secondary Metabolites from Microorganisms: A Boost to the Textile Industry. **Students involved** Hardik Singh, Shreyas Bhat, Sakshi Verma. Submitted to "**Industrial Applications of Microbial Secondary Metabolites-Biotechnological and Commercial Applications**" [Editors: **Neeraj Verma and Deepak Mishra**]. CRC press.
5. Scientific writing and communications: June –Sep 2023 Book Chapter: **Microbes as Biocontrol Agents for Sustainable Development** Sandeep Patra, Sneh Priya, Gupta Aishani, **submitted to** (Editors; Jata Shankar, Pradeep Verma, and Maulin P. Shah) Book Entitled '**Microbial Approach for Sustainable Green Technologies**' ISBN-9781032526485, CRC Press.
6. Scientific writing and communications: June –Sep 2023 Book Chapter: **Flexible fungal materials (FFMs): An industrial perspective. Students involved** Shreya Kapoor, Harsh Charak, Kaushiki Dutta, Aishani Gupta. **Submitted to** (Editors; Jata Shankar, Pradeep Verma, and Maulin P. Shah) Book Entitled '**Microbial Approach for Sustainable Green Technologies**' ISBN-9781032526485, CRC Press.
7. A Molecular Docking Study Targeting MRSA Pbp2a Protein: Submitted by Rakshita Yadav
8. Virtual Screening Of Novel Inhibitors Against Methicillin Resistant Staphylococcus Aureus: A Drug Repurposing Approach: Submitted by Tanisha Garg
9. A Molecular Docking Study Targeting MRSA Pbp4 Protein: An In-Silico Drug Repurposing Approach : Submitted by Meet Makwana
10. Molecular Docking Study Of Protein Cap-F: An In-Silico Drug Repurposing Approach : Submitted by Madhuri Bhattacharya
11. A Molecular docking study targeting MRSA Sortase B Protein : An In-silico drug repurposing approach: Submitted by Bazil Mehdi
12. A Molecular docking study targeting Klebsiella pneumoniae KPC-2: An in-silico drug repurposing approach : Submitted by Sandeep Patra

13. A Molecular Docking Study Targeting Klebsiella pneumonia DNA Gyrase: An In-silico Drug Repurposing Approach : Submitted by Sumana Saha

Research Projects (Major Grants/Research Collaboration)

1. College Research Grant **Repurposing drugs through phenotypic screening against Methicillin Resistant *Staphylococcus aureus* (MRSA)**”Project Code No. **CRG /RLA/303/2023, Jul 2023- Jun 2024** (Rs. 1,00,000/-)
2. College Research Grant ”**Combating Methicillin resistant *Staphylococcus aureus* (MRSA): A drug repurposing approach**” Jan 2020-Dec2022 (Rs. 50,000)
3. University of Delhi Innovation Project Code: **RLA 103 “Delineation of Groundwater Potential and potable quality in and around South Campus (University of Delhi) ridge area”**, from Mar 2012-May 2013 (10 lac)
4. University of Delhi Innovation Project Code: **RLA 202 “Structure Based Virtual Screening of Novel Inhibitors of Hepatitis C virus”** from Nov. 2013 to March 2015 (6 lac)
5. University of Delhi Innovation Project Code: **Project Code: RLA 304 “Dissemination of Antibiotic Resistance among Airborne Bacteria and its Public Health Implications”** 2015-2016 (5.5 lac)

Research proposals submitted in last 2 years

1. One Health Antimicrobial Resistance Surveillance in Gram-Negative Enteric Bacilli Isolated from Poultry and Nearby Environment in Delhi and Repurposing Drugs to ESBL Klebsiella pneumonia Submitted against SERB-Power call
2. Surveillance of the microbiological threats in the bioaerosols of cattle/dairy farms using metagenomic analysis (submitted : ICMR Apr 2022)
3. Identification and characterization of microbial and chemical air pollutants around Landfill areas of Delhi (submitted : ICMR Apr 2022)
4. A case-control study to assess the effect of air pollutants at the mining site on respiratory microbiome dysbiosis and its associated diseases in mine workers (submitted : ICMR Apr 2022)
5. Assessment of anti SARS-CoV-2 immunity development through vaccination and natural infection in the metropolitan city Delhi submitted under ICMR call for proposals on COVID-19 (June 2021)
6. Assessment of impact of COVID-19 pandemic on the emergence of antimicrobial resistance in bacteria submitted under ICMR call for proposals on COVID-19 (June 2021)
7. Assessing Menstrual Hygiene among School & College Girls in Rural Delhi-NCR and Promoting eco-friendly alternatives of non-biodegradable sanitary pads submitted under ICSSR IMPRESS 2nd call (shortlisted, result not declared)

Awards and Distinctions
<ol style="list-style-type: none"> 1. Awarded “International Distinguished Women Scientist award” for superior performance in Microbiology Conferred by Center for Professional Advancement, Vijayawada, Andhra Pradesh (8 Mar 2021) 2. Awarded Post doctoral fellowship: Division of John Hopkins in Singapore, Singapore (2002-2005) 3. Awarded gold medal for standing First in Delhi University during M.Sc. 4. Third position in Delhi University during B.Sc (Microbiology, Honours) 5. Awarded All India Post Graduate Fellowship at M. Sc level 6. Qualified University Grants Commissions (UGC), Govt. of India, Research Fellowship through National Eligibility Test (NET)
Association With Professional Bodies
<p>Life member of Association of Microbiologists of India</p> <p>Life member of International Association of Medical and Pharmaceutical Virologists</p>
Other Activities
<p>RESEARCH</p> <ol style="list-style-type: none"> 1. Reviewed a number of research articles for various national and international peer reviewed Journals of repute such as: <ol style="list-style-type: none"> i. The British Medical Journal (The BMJ) ii. Environmental Microbiology iii. Current Pharmaceutical Biotechnology iv. Plos Computational Biology v. <i>Journal of Applied Biology & Biotechnology</i> vi. 3 Biotech (BITC) vii. Journal of Biomolecular Structure and Dynamics viii. Plos one ix. Future Virology x. Future Microbiology xi. Inquiry xii. Biologica xiii. Pharma Reports xiv. International Immunopharmacology

- xv. Vaccinology
- xvi. Journal of Comparative Effectiveness Research
- xvii. Infection and Drug Resistance
- xviii. Journal of Multidisciplinary Healthcare
- xix. Risk Management and Healthcare Policy
- xx. Archives Virology
- xxi. VirusDisease
- xxii. Journal of Medical Mycology
- xxiii. Expert Review of Vaccines
- xxiv. Critical Reviews in Microbiology
- xxv. Chest

2. Actively involved in engaging B.Sc (H) Microbiology students in various research projects and reviews on MRSA, E.coli, HCV, SARS-CoV-2 etc.
3. Guided M. Sc. dissertation entitled “A Molecular docking study targeting *SARS-CoV-2* 3CLpro: An *In-silico* drug repurposing approach” from Jan-Jun 2021
4. Guided MSc Dissertation on “Virtual Screening Of Novel Inhibitors Against Methicillin-Resistant *Staphylococcus Aureus*: A Drug Repurposing Approach” from Dec 2018- Jun 2019
5. Guided MSc Dissertation on “*E. coli* Gyrase, An Important Target For Novel Therapeutics: In Silico Drug Repurposing” from Jan 2020- July 2020

PARTICIPATIONS

International

1. International Conference on Advances in Biosciences and Biotechnology (ICABB-2018)” organized by Department of Biotechnology, Jaypee Institute of Information Technology, Noida from 1st -3rd Feb, 2018
2. Participated and judged the scientific poster session at International conference on “INTERNATIONAL CONFERENCE ON ADVANCES IN PLANT AND MICROBIAL BIOTECHNOLOGY PMB-2017, (February 02-04, 2017) Organized by the Department of Biotechnology at Jaypee Institute of Information Technology, A-10 Sector 62, Noida.
3. 56th Annual Conference of Association of Microbiologists of India (AMI-2015) & International Symposium on “Emerging Discoveries in Microbiology” held from 8th to 10th Dec. 2015 at JNU.

4. International conference on “Antimicrobial Resistance, Novel Drug Discovery and Development: Challenges and Opportunities” organized by SRM University Haryana from March 2-3, 2015.
5. Successfully completed course on “Responsible Care and Use of Laboratory Animals”, Nov 25, 2004 at Singapore
6. 8th National University of Singapore-National University Hospital (NUS-NUH) Annual scientific Meeting, Oct. 2004.
7. Successfully completed course on “Fire Safety Awareness”, Aug 24, 2004 at Singapore, organized by the Training Academy of Singapore Civil Defence Force.
8. 7th NUS-NUH Annual scientific Meeting, Oct. 2003.
9. Successfully completed training course on “Basic Laboratory Safety and Basic Radiation Safety”, May, 2003 at Johns Hopkins Singapore

National

1. Two day workshop on “Establishment of Modalities for Skill Enhancement Courses” organized by Skill Enhancement Courses Committee, University of Delhi, on 4-5 Mar 2024 at Conference Centre, University of Delhi.
2. One week workshop on "BSL-3 LABORATORY TRAINING AND HANDLING PRACTICES FOR *Mycobacterium tuberculosis*" Department of Biochemistry, University of Delhi, South Campus from 19th – 25th July, 2021.
3. One day Google patent Workshop by Turnip Innovations
4. Two Weeks Certificate Course on Patents 28 Feb-14 Mar by Turnip Innovations
5. International Dialogue on Empowered Future-Women Role held on 8 Mar 2021 by Center for professional Advancement, West Midlands, United Kingdom
6. International Conference “Continuity, Consistency and Innovation in Applied Sciences and Humanities” (ICCIASH-2020), 13-14th August 2020, St. Martin’s Engineering College, Dhulapally,
7. Webinar “10 Reasons Why Manuscripts Are Rejected” 12 Jun 2021 by Centella
8. One week FDP “Biosafety, Bioethics and IPR”, Department of Microbiology, RLAC, 24-28 Aug, 2020,
9. One week FDP “ICT Tools for Effective Teaching learning” conducted by IQAC, RLAC, 5-9 Aug, 2020.
10. Online workshop on “Drug Discovery Workshop Series on StarDrop and SeeSAR” by Zastra Inovations, Bengaluru from 6-10 Aug, 2020.

11. Webinar series on MD simulations and Molecular docking Nyro Research India (April- May 2020)
12. Webinar series on “Next Generation Sequencing and metagenome analysis” 15-16th May 2020 organized by Department of Microbiology , Ram Lal Anand College
13. Webinar on “Referencing and Citation”, held by Sri Aurobindo College (evening) and Ram Lal Anand College on 20 April, 2020,
14. FDP on Emotional Intelligence, Department of Computer Science, RLAC on 4-5 Jan, 2019.
15. Participated in workshop on “Emerging Trends in Target Identification and Drug Design” organized by Department of Biotechnology, Jaypee Institute of Information Technology, Noida on 31st Jan, 2018
16. Participated in 7th workshop on “Bioinformatics and Molecular Modelling in Drug Design” organized by Bioinformatics Infrastructural Facility at ACBR from March 23-25, 2017.
17. FDP on “Recent Advances in Diagnostics and Therapeutics” organized by Department of Biotechnology, Jaypee Institute of Information Technology, Noida from July 18 to 23rd , 2016.
18. Participated in workshop on “Renovating Bacterial Taxonomy with Bioinformatics” Organized by ICAR-NBAIM and University of Delhi, from May 14-15, 2015.
19. 10th Sumposium on “Frontiers in Biomedical Research” organized by Dr. BR Ambedkar Centre for Biomedical Research, University of Delhi, 29th to 31st October 2015.
20. Participated in the Faculty Development Program on “Nanomaterials and Its Applications” organized by Department of Biotechnology, Jaypee Institute of Information Technology, Noida from July 13 to 18, 2015.
21. Participated in 5th Workshop on Bioinformatics and Molecular Modeling in Drug Design, from 21-23 March, 2013 at Dr. BR Ambedkar Centre for Biomedical Research
22. Participated in National Conference on “Medical Biotechnology-Vision 2020” from April 16-18, 2010 Maharishi Dayanand University, Rohtak
23. Refresher course in “Biotechnology and Its Applications” At UGC-ASC CPDHE-ILLL, University of Delhi, July21- Aug10, 2009
24. Refresher course in “Biotechnology” at UGC-ASC Jawahar Lal Nehru Univ., Delhi, Jul30-Aug24, 2007.
25. Orientation course in “Natural Science” at UGC-ASC Jawahar Lal Nehru Univ. Delhi, Nov19-Dec14, 2001.

26. Participated and volunteered in organization of National Symposium on “Microbial Technologies for Environmental Management and Resource Recovery” from Oct 1-2, 1997 by Departments of Microbiology and Environmental Biology, University of Delhi.
27. Participated in DST sponsored Contact programme on “Application of Molecular Microbial Techniques” Jan, 1997 at JNU.
28. Participated in 38th Annual Conference of AMI, from Dec 12-14, 1997 at Jamia Millia Islamia, New Delhi.
29. Participated in Workshop on Bioinformatics “Coping with the Pace”, March. 1996, at Distributed Information Sub-Centre, University of Delhi and DBT, New Delhi.
30. Successfully completed Advanced Training Program on “Research Methodologies in Mycorrhizae” from 4th to 17th Oct, 1995 at TERI.

Reviewer JBERS: <https://www.jelsciences.com/editor-biography?id=976&eName=Vandana-Gupta>

I have contributed to the academic and other activities of the college and always eagerly walked that extra mile for the benefit of students and the college community. In addition to the regular teaching mandate, I have trained students in scientific writing and communication as is evident from the publications of research articles, review articles, book chapters etc. in International journals of repute and internationally published books. I also engaged undergraduate students in various research projects of longer as well as short durations. I have responsibly discharged my duties as convener and co-convener of various committees and as nodal officer examination, coordinator Research and IPR cell, Member secretary Institutional ethics committee in addition to various other committees of the college over the years and contributed to the growth of our college to the best of my ability. I am a globally recognized author and researcher in my areas of research with about 1100 citations and h-index =10 and i10 index=10. I am a reviewer of articles for international journals with an impact factor as high as 30 and a regular contributor to the global research in Biological sciences. (Please refer to my resume for further details). I am a well-recognized author on COVID-19, with five international publications, 10 international presentations and 3 more publications in the pipeline and worked on SARS DNA vaccine from Dec 2002 to Mar 2005 as an international post-doctoral fellow at Division of John Hopkins, Singapore.

Additionally, I am working towards gender sensitization and women empowerment. I also run a social outreach program through an online social awareness campaign on HPV vaccination “UDISHA: A new dawn” since Feb 2021 as there is little or no awareness regarding the availability of HPV vaccine and the cancers it protects against and who and when to take it.

A handwritten signature in blue ink, appearing to read "Gunderson", with a long horizontal stroke extending to the right.

Signature of Faculty Member