



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	Associate Professor					
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Web-Page	https://rlacollege.edu.in/pdf-profile/microbiology/vandana_gupta_MICROBIO.pdf Google scholar: https://scholar.google.com/citations?user=dR1O9IEAAAAJ&hl=en&oi=ao Research gate: https://www.researchgate.net/profile/Vandana-Gupta-10					
ORCID ID	https://orcid.org/0000-0003-4785-5615					
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		
<ol style="list-style-type: none"> 1. Associate Professor – since 2010 Department of Microbiology, Ram Lal Anand College, University of Delhi 2. Reader – 2005-2010 at Department of Microbiology, Ram Lal Anand College, University of Delhi 3. Lecturer in Senior scale – 2001-2005 at Department of Microbiology, Ram Lal Anand 4. Lecturer – 1998-2001 at Department of Microbiology, Ram Lal Anand College, University of Delhi 		
Administrative Assignments		
<p>Current: •</p> <p>Nodal Officer: Examinations</p> <p>Coordinator: COVID Task Force</p> <p>Coordinator: Research and IPR cell</p> <p>Member Secretary: Institutional Ethics Committee</p> <p>Convener: Women welfare committee</p> <p>Co-Convener, Discipline Committee</p> <p>Previous:</p> <p>Successfully discharged duties as Convener, Co-convener or Member of various committees in the college for last 18 years of service. Worked as Deputy Superintendent of examinations for 5 semesters</p> <p>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.</p> <p>https://docs.google.com/document/d/15U-O918fgFdnk_Z141n7_Ytstg6vPbt8DQMAoQzNljg/edit?usp=sharing</p>		
Areas of Interest / Specialization		
<ol style="list-style-type: none"> 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. <i>E coli</i>, 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. 4. Attained experience in construction and validation of DNA vaccine against SARS virus during Post 		

doctoral 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 5 students B.Sc (Hons) Microbiology under College Research Grant Scheme

Mentoring 18 students for their research projects, and scientific writing skills

Publications Profile

Patent

1. Filed patent application entitled “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)

Publications (communicated):

1. Dwivedi V, Gupta RK, Gupta A, Chaudhary VK, Gupta S, Gupta V. “**Repurposing Novel Antagonists to Target p7 Viroprotein of HCV Using *in silico* Approach**”
2. Gupta I, Baranwal P, Gupta V. “**Mucormycosis: A challenge for patients recovering from COVID-19 in India**”
3. Singh G, Soni H, Gupta V, Chaudhuri (Chattopadhyay) P. **Identification of potent and selective natural inhibitors of Methicillin Resistant *Staphylococcus aureus* DHFR**
4. Lohia G, Gupta S, Gupta V. **Cephalosporins: possible antagonists for HCV helicase**

Published

1. Sharma B, Shahanshah MFH, Gupta S, Gupta V. Recent advances in the diagnosis of COVID-19: A bird's eye view. *Expert Rev Mol Diagn.* 2021 Jan 10. doi: 10.1080/14737159.2021.1874354. PMID: 33423567
2. Singh A, Gupta V. SARS-CoV-2 therapeutics: how far do we stand from a remedy? *Pharmacol Rep.* 2021 Jan 3:1–19. doi: 10.1007/s43440-020-00204-0. Epub ahead of print. PMID: 33389724; PMCID: PMC7778692.
3. 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.
4. Kaur SP, Gupta V (2020) SARS-CoV-2 Vaccine: Reconnoitering the Prospects. *Vaccine Res Dev* 1(1):1-5.
5. 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
6. 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
7. 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 **2.9, UGC care and SCOPUS listed**
8. 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
9. 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 (impact factor: 2.27) **2190-572X / 2190-5738; UGC care and SCOPUS listed**
10. 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” **Bioinformatics** 2019 Jun; 15(6): 439-447. (impact factor: 0.44) ISSN 0973-2063 (online) **UGC care listed**
11. 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 (impact factor: 0.99) **UGC care and SCOPUS listed ISSN: 2347-3517**
12. 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**)
13. 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: 2.65) **UGC care and SCOPUS listed ISSN: 0001-706X**
14. 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. (impact factor: 2.335) **UGC care and SCOPUS listed**

15. 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**
16. **Gupta V**, Tabiin TM, Sun K, Chandrashekar A, Anwar A, Yang K, Chikhlikar P, Salmon J, Brusic 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. (impact factor: 2.657) **UGC care and SCOPUS listed; ISSN. 0042-6822**
17. 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
18. **Gupta V**, 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**
19. Garg, S., Gupta, V. and Satyanarayana, T. 1998. Biofertilizer for multipurpose tree species. *Proc. Natl. Symp.* (Karad, Dec. 28-29, 1997), 72-82.
20. 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.
21. **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. Singh A, Kaur SP, Shahanshah M F H, Sharma B, Chaudhary VK, Gupta S, **Gupta V**. "**COVID-19: Vaccine Perspective**" (submitted in Jan 2021) Chapter in in the textbook 'Coronavirus Disease 2019 (COVID-19)' ed. **Ali Gholamrezanezhad**, publisher Wiley-USA.
2. Shahanshah M F H, Sehrawat H, Wijewardana C, Pal S, Gupta A, Diwan P, Gupta S, **Gupta V**. "Recent Advances in Chikungunya Virus Therapeutics: An Overview" Chapter.ID_72327 (submitted in Apr 2021), **Nova Science Publishers, Inc. USA**
3. Sehrawat H, Shahanshah MFH, Wijewardana C, Pal S, Chaudhary VK, Gupta S, **Gupta V**. "Recent Progress on Immunotherapy and Immunoprophylaxis of Chikungunya Virus" (submitted in Apr 2021), Chapter.ID_72317 **Nova Science Publishers, Inc. USA**
4. Hooda S, George AJ, Sharma V, **Gupta V**. "**Detection and Management of Mycotoxins**" Book entitled "Sustainable utilization of Fungal Resources : Applications on plants and animal health" ed Rajpal VR. Publisher Springer International
5. 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
6. Kaur SP, Srivastava T, Sharma A, Gupta S, Chandra NS, **Gupta V**. (submitted in June 2020)

Industrial applications of soil microbes: Production of enzymes, organic acids, and biopigments in Industrial Applications of Soil Microbes: Eds. *Neeraj Verma, Shampi Jain and Ashutosh Gupta*, Bentham Science Publishers

7. Singh A, Kapoor S, Bhatia P, Gupta S, Chandra NS, **Gupta V. (submitted in June 2020)** Role of Soil Microbes in the Sustainable Development: Nutrient Transformation, Bioremediation and Biodeterioration in Industrial Applications of Soil Microbes: 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. (submitted in June 2020)** Role of Soil Microbes in the Sustainable Development: Agriculture, Recovery of Metals and Biofuel Production in Industrial Applications of Soil Microbes: Eds. *Neeraj Verma, Shampi Jain and Ashutosh Gupta*, Bentham Science Publishers

Chapters in books and e-chapters (Published)

1. 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**,
2. **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
3. **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
4. 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
5. **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
6. Sarethy IP, Gupta S, **Gupta V. Bacterial Systematics**. for virtual Learning centre, Delhi University for the undergraduate program (2015) ISSN No. 2349-154X
7. **Gupta V** and Gupta S (2008). Diversity of Microbial World, **National Science Digital Library**. **Link : <http://nsdl.niscare.res.in/handle/123456789/137>**.
8. 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.
9. **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.
10. **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.
11. **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.

12. 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.
13. 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. **MIKROVITAE 2021**, the annual department fest of Mikrobiologika, on 3rd April 2021, Ram Lal Anand College, University of Delhi, New Delhi 110021 (google meet)
2. 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)
3. "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)
4. 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)
5. 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)
6. 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)
7. 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)
8. Alumni Lecture "Polarity Establishment in Zebra Fish" by Dr. Prateek Arora on July 3, 2020.
9. Organizing Secretary: Webinar on Advantage IPR, an overview and implications in your field, 2nd May, 2020 webinar
10. Organizing Secretary: International Seminar on "Nanoparticles in Biology" 29th Jan, 2020 at Ram Lal Anand College, University of Delhi, New Delhi 110021
11. Organizing Secretary: One Day National Seminar on "'Meta-genomics and Genome Editing' 5th February 2020 organized under Department of Microbiology, Ram Lal Anand College
12. 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
13. 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.
- 14. Organizing Secretary: Workshop on “Intellectual Property Rights (IPR) and Entrepreneurship: How to kick start your start-up” 30 March, 2019.
- 15. Organizing secretary: Faculty development program on “Writing Research Proposals and Addressing IPR related Issues” from 29-30 March, 2019
- 16. Organised two days Faculty Development Programme from 29 to 30 March, 2019 On “Writing Research Proposals and Addressing IPR Related Issues”
- 17. Organised One day workshop for Students on “Entrepreneurship: How to kick start your startup” on March 30, 2019
- 18. Organised One day National seminar on Probiotics: Ameliorating the burden of lifestyle disorders” held on 1st Feb, 2019
- 19. 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. 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.
- 2. Resource Person: “Ghost writing and Determining Authorship “ certificate course July-Aug 2020
- 3. 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)
- 4. 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
- 5. Invited Talk on “Bioinformatics in Drug Discovery: HCV a case study” on the occasion of Golden Jubilee Celebration of Swami ShraddhaNand College, Department of Microbiology on 4 March 2017.

Presentations: International

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

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

- v. Kapoor S, Singh A, **Gupta V**. In-silico evaluation of potential intervention against SARS-CoV-2 RNA-dependent RNA Polymerase
 - vi. Sehrawat H, Pal S, **Gupta V**. In-silico analysis to discover SARS-CoV-2 Nsp7-8 inhibitors
 - vii. Wijewardana C, **Gupta V**. Investigation into potential inhibitors of SARS CoV-2 NSP9 : A molecular docking study
 - viii. Bhatia P and **Gupta V**. Computational Identification of SARS-CoV-2 Nsp3 Antagonists.
 - ix. Sachdeva S and **Gupta V**. Molecular docking study targeting SARS- CoV-2 3CL_{pro}: An In-silico drug repurposing approach
 - x. Sachdeva S and **Gupta V**. Phytochemicals as SARS-CoV-2 M_{pro} inhibitors
 - xi. Sharma B and **Gupta V**. Virtual screening of approved drugs using SARS-CoV-2 Nsp1 as target
 - xii. Baranwal P, Shahanshah MFH, **Gupta V**. Potential Antivirals targeting Spike Glycoprotein of SARS-CoV-2
13. 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)
 14. 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)
 15. 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)
 16. 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**)
 17. 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**)
 18. 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
 19. 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
 20. 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.

21. 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.
22. 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.
23. 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.
24. 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.
25. **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.
26. 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.
27. 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. **Gupta V**, Satyanarayana T, and Garg S (1995). Heavy metal tolerance in Ectomycorrhizal fungi. 36th Annual Conference of the Association of Microbiologists of India, Nov. 8-10, Hisar, Haryana, India, pp.235.
6. **Gupta V**, and Satyanarayana T (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. **Gupta V**, 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

Research Projects (Major Grants/Research Collaboration)

1. College Research Grant "**Combating Methicillin resistant *Staphylococcus aureus* (MRSA): A drug repurposing approach**" Jan 2020-Dec 2020
2. 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 May 2012-May 2013
3. 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
4. University of Delhi Innovation Project Code: **Project Code: RLA 304 "Dissemination of Antibiotic Resistance among Airborne Bacteria and its Public Health Implications"** 2015-2016

Research proposals submitted in last 2 years

1. 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)
2. 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)
3. 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)
4. Assessment and awareness of the use of "Over-the-Counter medicines(OTC)" among educated young adults in Delhi submitted under ICSSR IMPRESS 2nd call (shortlisted, result not declared)
5. Combating Methicillin-Resistant *Staphylococcus aureus* (MRSA): Structure based Drug Repurposing Approach submitted to University of Delhi, under the call for proposals from colleges in 2020
6. "Evaluation and Restoration of Delhi's Water Blueprints" applied under UGC STRIDE scheme 2019 (result not declared)

Awards and Distinctions

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

Life member of Association of Microbiologists of India

Life member of International Association of Medical and Pharmaceutical Virologists

Other Activities

RESEARCH

1. Reviewed a number of research articles for various national and international peer reviewed Journals of repute such as:

- i. The British Medical Journal (The BMJ)
- ii. Environmental Microbiology
- iii. Current Pharmaceutical Biotechnology
- iv. Plos Computational Biology
- v. *Journal of Applied Biology & Biotechnology*
- 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

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. One week workshop on "BSL-3 LABORATORY TRAINING AND HANDLING PRACTICES FOR *Mycobacterium tuberculosis*" organized by Department of Biochemistry, University of Delhi South Campus from 19th – 25th July, 2021.
2. One day Google patent Workshop by Turnip Innovations
3. Two Weeks Certificate Course on Patents 28 Feb-14 Mar by Turnip Innovations
4. International Dialogue on Empowered Future-Women Role held on 8 Mar 2021 by Center for professional Advancement, West Midlands, United Kingdom
5. International Conference “Continuity, Consistency and Innovation in Applied Sciences and Humanities” (ICCIASH-2020), 13-14th August 2020, St. Martin’s Engineering College,

Dhulapally,

6. Webinar “10 Reasons Why Manuscripts Are Rejected” 12 Jun 2021 by Centella
7. One week FDP “Biosafety, Bioethics and IPR” held by Department of Microbiology, Ram Lal Anand College on 24-28 Aug, 2020,
8. One week FDP “ICT Tools for Effective Teaching learning” conducted by IQAC, Ram Lal Anand College from 5-9 Aug, 2020.
9. Online workshop on “Drug Discovery Workshop Series on StarDrop and SeeSAR” by Zastr Innovations, Bengaluru from 6-10 Aug, 2020.
10. Webinar series on MD simulations and Molecular docking Nyro Research India (April- May 2020)
11. Webinar series on “Next Generation Sequencing and metagenome analysis” 15-16th May 2020 organized by Department of Microbiology , Ram Lal Anand College
12. Webinar on “Referencing and Citation”, held by Sri Aurobindo College (evening) and Ram Lal Anand College on 20 April, 2020,
13. FDP on Emotional Intelligence held by Department of computer Science, Ram Lal Anand College on 4-5 Jan, 2019.
14. 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
15. Participated in 7th workshop on “Bioinformatics and Molecular Modelling in Drug Design” organized by Bioinformatics Infrastructural Facility at ACBR from March 23-25, 2017.
16. Faculty Development Program on “Recent Advances in Diagnostics and Therapeutics” organized by Department of Biotechnology, Jaypee Institute of Information Technology, Noida from July 18 to 23rd , 2016.
17. Participated in workshop on “Renovating Bacterial Taxonomy with Bioinformatics” Organized by ICAR-NBAIM and University of Delhi, from May 14-15, 2015.
18. 10th Sumposium on “Frontiers in Biomedical Research” organized by Dr. BR Ambedkar Centre for Biomedical Research, University of Delhi, 29th to 31st October 2015.
19. Participated in 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.
20. 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
21. Participated in National Conference on “Medical Biotechnology-Vision 2020” from April 16-18, 2010 Maharishi Dayanand University, Rohtak
22. Refresher course in “Biotechnology and Its Applications” At UGC-ASC CPDHE-ILLL, University of Delhi, July21- Aug10, 2009
23. Refresher course in “Biotechnology” at UGC-ASC Jawahar Lal Nehru University, Delhi, July30-Aug24, 2007.
24. Orientation course in “Natural Science” at UGC-ASC Jawahar Lal Nehru University, Delhi, Nov 19- Dec 14, 2001.

25. 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.
26. Participated in DST sponsored Contact programme on “Application of Molecular Microbial Techniques” Jan, 1997 at JNU.
27. Participated in 38th Annual Conference of AMI, from Dec 12-14, 1997 at Jamia Millia Islamia, New Delhi.
28. Participated in Workshop on Bioinformatics “Coping with the Pace”, March. 1996, at Distributed Information Sub-Centre, University of Delhi and DBT, New Delhi.
29. 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>



Signature of Faculty Member