

Curriculum-Vitae

Dr. Bhanumati Singh
Assistant Professor
M.Sc, Ph. D (Microbiology)
Department of Biotechnology
Bundelkhand University, Jhansi
ID: BU_T_S_0416



Present Address	Permanent Address
Department of Biotechnology J.C. Bose Institute of Life-Sciences Bundelkhand University Kanpur Road, Jhansi-284128 (U.P.)	42-Kailash Residency, Mahakali Vidhyapeeth Road, Near Kisan Bazar, Jhansi-284002
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Education:

Ph.D. (Microbiology); Specialization: Microbial Biotechnology; Year of Award: 2002; Institution: Institute of Microbiology & Biotechnology, Barkatullah University, Bhopal (M.P.)
M.Sc. (Microbiology); 1997; Center for Study of Microbiology, Jiwaji University, Gwalior (M.P.); 73.8% (Gold Medalist of Jiwaji University)
B.Sc. (Life-Sciences); 1995; K.R.G. College, Jiwaji University, Gwalior (M.P.); 66.7%
XII (PCB), 1992; CBSE Board, K.V. No.1, Gwalior (M.P.); 71.2%
X (All Compulsory), CBSE Board, K.V. No.1, Gwalior (M.P.); 76.0%

Achievements:

Topped Jiwaji University, Gwalior (M.P.) in M.Sc.-Microbiology, 1997
B-Certificate Holder of NSS

Present occupation: Assistant Professor in Department of Biotechnology, Bundelkhand University, Jhansi (Date of Joining: 26-07-2003)

Area of specialization: Microbial Biotechnology

Teaching and research experience: More than 20 Years of Teaching and Research

Details of Ph.D. under Supervision

1. Shiva Shirotiya: Pursuing Ph.D on Biosynthesis of Gold Nanoparticles using waste fruit peel and to validate its antimicrobial and anticancerous activity.(BU/Res Cell/2017/1725 dated 20/4/2017)
2. Devanshi Chandel: Awarded in 2009 (BU/Res/2009/10763-929 dated 18/5/2009)
Title: Characterization of Ber by DNA fingerprinting
Co-supervisor: Dr. A.K. Singh, Senior Scientist, Division of fruits and horticulture, IARI, New Delhi
3. Farah Praveen: Awarded in 2013 (BU/Res/2013/6064-6348 dated 20/5/2013)
Title: Role of immunological and non-immunological variants and their clinical relevance in normal and recurrent pregnancy loss
Co-supervisor: Prof. Suraksha Agarwal, Head, Medical genetics, SGPGIMS, Lucknow.

Details of Ph.D under Co-Supervision

1. Anubhav Jain: Awarded in 2009 (BU/Res/2009/11222-380 dated 10/6/2013)
Title: Cloning and Sequencing of Milk Gene(s) of Indian Goat Breeds.
Supervisor: Prof. P.S. Bisen, Ex-director and Dean Academics, Bundelkhand University, Jhansi
IInd Co-supervisor: Dr. Dinesh Kumar, Scientist, NBAGR, Karnal (Haryana)

- Particulars of Research Project:** 1) Completed 01 UGC Sponsored Research Project {F. No. 39-972/20101 (SR)}entitled “Strain Improvement for the enhanced production of γ -linoleic acid (GLA) from *Spirulina platensis* and its use as a complete food so as to overcome the problem of malnutrition in Bundelkhand Region” costing **Rs. 2.0 Lakh**
- 2) Completed one Major Project in 2023 on NAMP (National Ambient Air Quality Monitoring Program) sponsored by UPPCB, Lucknow (U.P.) costing **Rs. 7.5 lakh/Annum** running from April-2007.

Orientation/Refresher Course attended FOR THE PURPOSE OF CAS: Attended **02 UGC-Orientation Programs** and **02 UGC Refresher Course** and **01 FDP**

02 Participated in UGC sponsored Refresher Course (online) on IPR and Patents Development organized by Jai Narain Vyas University, Jodhpur, Rajasthan from 09-07-22 to 22-07-2022 and another Refresher Course at UGC-ASC, Rajasthan University, Jaipur in (01.11.2013-21.11.2013)

02 UGC-Orientation Programs one at UGC-Academic Staff College, Kumaun-University (14.06.2008-12.07.2008), Nainital (Uttarakhand) and another at UGC- Academic Staff College, Himachal Pradesh University (31.05.2010-26.06.2010), Shimla, (H.P.) respectively.

01 FDP at GADTLC, Sri Guru Tegh Bahadur Khalsa College University of Delhi, a Centre of Ministry of Education under PMMMNMTT, on Moocs and E-content Development from 25 may 2023 to 31 May 2023.

Membership of Professional Bodies/Societies:

1. Life-Member of Association of Microbiologists of India (AMI) 2411/2010
2. Life-Member of Indian Science Congress Association (ISCA) L-16187
3. Life-Member, The Society of Biological Chemists, India (L-4240)

Administrative experience:

1. Worked as Centre Superintendent and Assistant Centre Superintendent in Department of Biomedical Sciences, Bundelkhand University, Jhansi in 2003, 2004 and 2005 respectively.
2. Worked as Centre Superintendent in Department of Microbiology, Bundelkhand University, Jhansi in 2004
3. Worked as Assistant centre Superintendent in Department of Biotechnology, Bundelkhand University, Jhansi in 2006, 2007, 2012, 2013, 2014, 2015 and in 2016.
4. Have been member of Examination Flying Squad of Bundelkhand University in the year since 2009, 2012, 2015, 2017, 2018.
5. Member-BOS in Biotechnology, BU, Jhansi since 2003

Innovations/Contributions in Teaching:

- a) Design of Curriculum: Being member of BOS actively involved in up-gradation of Curriculum of B.Sc. (H) & M.Sc.-Biotechnology
- b) Teaching methods: Teach through multimedia (power-point) & OHP
- c) Laboratory experiments: designed several new experiments for the UG and PG Biotechnology students
- d) Evaluation methods: Evaluation based upon multi-dimensional activities (seminar, poster, research articles, group discussion etc.)
- e) Preparation of resource material including books, reading materials, Laboratory manual etc. (I have prepared laboratory manual, written chapters in Books, also reading material for the students.)
- f) Remedial Teaching/Student Counseling (academic): I take extra classes for remedial purpose followed by counseling of the students.

Any other information:

1. Working knowledge of MS office.

2. Visiting Faculty in Department of Microbiology, Jiwaji University, Gwalior.

3. Has been appointed as external examiner by Hon'ble Vice chancellor of Jiwaji University, for various examinations in affiliated colleges

3. External Examiners in Barkatullah University, Bhopal; Jiwaji University, Gwalior; Guru Jambhashewar University, Hisar; RDVV, Jabalpur and Veer Bahadur Poorvanchal University, Jaunpur

4. Member, BOS in Biotechnology, Member-RDC and Member, Purchase Committee, Bundelkhand University, Jhansi (U.P.)

Publication Profile:

Original Research Papers: 28
Review Article: 02
Chapter in Book: 07

List of Publications of Dr. Bhanumati Singh:

1. Shiva Shirotiya, **Bhanumati Singh** and Chauhan VS (2020) Novel synthesis of streptomycin and Nystatin conjugated gold nanoparticles with potent antimicrobial activity. *Advances in BioResearch*. 11 (6) : 66-72
2. Shiva Shirotiya, **Bhanumati Singh** and Chauhan VS (2020) Phytosynthesis of gold nanoparticle using waste fruit peel extract and their anti-cancer and anti-microbial activity. *International Journal of Botany Studies*. 5(6) : 789-796
3. Shiva Shirotiya, **Bhanumati Singh** and Chauhan VS (2020) Comparative study of biosynthesized silver and gold nanoparticles using peel extract of *Momordica charantia* and their antimicrobial efficacy. *Bulletin of Environment, Pharmacology and Lifesciences*. 9: 124-130
4. Rajiv Ranjan, K K Dwivedi, V S Chauhan, R P sah, Manoj Choudhary, B S Chauhan and Mayank Chaturvedi (2020) Screening of different species and varieties of *Avena sativa* L. through zinc, iron and some important morphological characters. *Research Journal of Agricultural Sciences*. 11 (3) : 525-529
5. Pavan Kumar, V S Chauhan, B Singh, Raghwendra Kumar, Ram Ji Lal and Sangeeta Srivastava (2019) In silico comparison of kinase RGA markers in red rot resistant and susceptible sugarcane genotypes. *Indian Journal of Sugarcane Technology*. 34 (02) : 104-106
6. Chauhan VS, **Singh Bhanumati** and Shiva Shirotiya (2018) Household waste *Carica papaya* peel mediated green synthesis of silver nanoparticles and its antimicrobial and antioxidant activity. **International Journal of Technical Innovation in Modern Engineering & Science**. 4(9):745-751
7. Chauhan VS, **Singh Bhanumati**, Shree Ganesh and Jamshed Zaidi (2018) Statistical methods for the assessment of Air Pollution of Jhansi city, Uttar Pradesh, India. **Flora and Fauna**. 24(1):187-196
8. Chauhan VS, **Singh Bhanumati** and Shiva Shirotiya (2017) Green synthesis of gold nanoparticles and its diverse applications in various fields. **Annals of Plant Sciences**. 6(11):1720-1725
9. Kumar Pawan, Chandra Sameer, **Singh Bhanumati**, Chauhan VS and Srivastava Sangeeta (2017) PCR based RGAs strategy for identification of putative disease resistance genes analogues in sugarcane. **Trends in Biosciences**. 10(33): 7029-7034.
10. A Rajesh, Sharma JG, **Singh Bhanumati**, Kumar Krishan, Nahar Pradeep and Kumar Saroj (2017) A simple and efficient method for removal of phenolic contaminants in wastewater using covalent immobilized horseradish peroxidase. **Journal of Materials Science and Engineering B7** (1-2): 27-38

11. Yadav A, Verma P, Chauhan VS, **Singh Bhanumati** and Saxena AK (2017) Beneficial microbiomes: Biodiversity and potential biotechnological applications for sustainable agriculture and human health. **Journal of Applied Biology and Biotechnology (JABB)**. 5(6):45-57.
12. Yadav A, Verma P, **Singh Bhanumati**, Chauhan VS, Suman A and Saxena AK (2017) Plant growth promoting bacteria: Biodiversity and Multifunctional attributes for sustainable Agriculture. **Advances in Biotechnology & Microbiology (AIBM)**. 5(5):001-0016.
13. Yadav A, Verma P, **Singh Bhanumati**, Chauhan VS, Suman A, Saxena AK and Dhaliwal HS (2017) Plant Microbiomes and its beneficial multifunctional plant growth promoting attributes. **International Journal of Environmental Sciences & Natural Resources (IJESNR)**. 3(1):01-08.
14. Chauhan VS, **Singh Bhanumati**, Shree Ganesh and Jamshed Zaidi (2016) Comparative study of ambient air quality status of Lucknow and Jhansi city in UttarPradesh, India. **Octa Journal of Environmental Research**. 4(2):117-121
15. Chauhan VS, **Singh Bhanumati**, Shree Ganesh and Jamshed Zaidi (2016) Air pollution in Jhansi: Air quality indexing and statistical data analysis. **Octa Journal of Environmental Research**. 4(1):008-017
16. Chauhan VS, **Singh Bhanumati**, Shree Ganesh and Jamshed Zaidi (2014) Status of Air pollution during festival of light (Diwali) in Jhansi, Bundelkhand Region (India). **Asian Journal of Science and Technology**. 5(3):187-191
17. Chauhan VS and **Singh Bhanumati** (2013) Air quality status of commercial and sensitive area of Jhansi city, Bundelkhand (U.P.) India. **International Journal of Renewal and Environmental Sciences**.
18. Yadav SS, Chauhan VS and **Singh Bhanumati** (2012) Isolation of salt tolerant cyanobacterium *Synechococcus* sps. and its use for reclamation of salt affected agricultural soil. 46 (2). (ISSN: 0021-3721).
19. Parveen F, Faridi RM, **Singh B** and Agrawal S. (2011) Analysis of CCR5 and CX3CR1 gene polymorphisms in association with unexplained recurrent miscarriages among north Indian women. **Cytokine**. 2011; 56(2):239-44. (ISSN 1043-4666)
20. Praveen F, Tripathi G, **Singh B**, Rehan M. F. and Agrawal S. (2009) Acetylcholinesterase gene polymorphism and recurrent pregnancy loss. **International Journal of Gynecology and Obstetrics**. 68-69 (ISSN 0020-7292)
21. Praveen F, Tripathi G, **Singh B**. and Agrawal S. (2008) Association of chemokines receptor (CCR5 Delta32) in idiopathic recurrent miscarriages among north Indians. **Arch Gynecol Obstet**. 280 (2): 229-234 (eV ISSN 1432-0711; pV ISSN 0932-0067)
22. Devanshi, Singh A.K., Sharma P., **Singh B.**, Singh R. and Singh N.K. (2007) Molecular profiling and genetic relationship among ber (*Ziziphus sp.*) genotypes using RAPD markers. **Indian Journal of Genetics**. 67(2):264-270. (ISSN 0022-1333)

23. Singh A.K., Sharma P., Singh R. **Singh B.** Koundal K.R. and Singh N.K. (2007) Assessment of genetic diversity in *Ziziphus mauritiana* using inter simple sequence repeat markers. **J. Plant Biochemistry & Biotechnology**. 16(1): 35-40. (eV ISSN 0979-1275; pV ISSN 0971-7811)
24. Chauhan V.S., **Singh B.**, Singh S. and Bisen P.S. (2003) Regulation of potassium uptake in the sodium-resistant (NaCl^r) and Thallium-resistant (TlCl^r) mutant strain of diazotrophic cyanobacterium *Anabaena variabilis*. **Current Microbiology**. 46: 59-64. (eV ISSN 0343-8651; pV ISSN 1432-0991)
25. **Singh B.**, Chauhan V.S., Singh S. and Bisen P.S. (2002) Physiological alterations and regulation of heterocyst and nitrogenase formation in Het⁻ Fix⁻ mutant strain of *Anabaena variabilis*. **Current Microbiology**. 45:315-322. (eV ISSN 0343-8651; pV ISSN 1432-0991)
26. Chauhan V.S., **Singh B.**, Singh S. and Bisen P.S. (2001) Regulation of sodium influx in the NaCl-resistant (NaCl^r) mutant strain of cyanobacterium *Anabaena variabilis*. **Current Microbiology**. 42:100-105. (eV ISSN 0343-8651; pV ISSN 1432-0991)
27. **Singh B.**, Chauhan V.S., Singh S. and Bisen P.S. (2001) Isolation and partial characterization of Het⁻ Fix⁻ mutant strain of the diazotrophic cyanobacterium *Anabaena variabilis* showing chromatic adaptation. **Current Microbiology**. 43:265-270. (eV ISSN 0343-8651; pV ISSN 1432-0991)
28. Chauhan V.S., **Singh B.**, Singh S., Gour R.K. and Bisen P.S. (2000) Isolation and characterization of the thylakoid membranes from the NaCl-resistant (NaCl^r) mutant strain of the cyanobacterium *Anabaena variabilis*. **Current Microbiology**.41: 321-327.(eV ISSN 0343-8651; pV ISSN 1432-0991)

Review Article:

1. **Chauhan VS and Singh Bhanumati (2012)** Bioalgae concentrates “a magic blend of microalgae. **Biotech Today** (Society of Green World for Sustainable Environment). 2:16-19.
2. **Singh B.**, Chauhan V.S., Gour R.K., Singh S. and Bisen P.S. (1999) Heterocyst: Current status and Future Prospects. **Journal of Indian Botanical Society**. 78: 25-32. (pV ISSN 0019-4468)

Chapters in Book:

1. Shirotiya Shiva, Singh Bhanumati and Chauhan, V. S. (2020) Nanoparticles: Synthesis methods, Characterization routes and various applications. **Current Research trends in India**. 5: 50-58 (ISBN: 9798625383)
2. Yadav A, Divjot Kaur, Sushma Sharma, Shaswati Ghosh Sachan, Bhanumati Singh, V. S. Chauhan, R Z Sayyed, Rajiv Kaushik and Anil Kumar Saxena. (2019) Psychrotrophic microbes: biodiversity, mechanisms of adaptation and biotechnological implications in alleviation of cold stress in plants. In : Plant growth promoting rhizobacteria for sustainable stress management, 219-253, Springer, Singapore (ISBN: 9789811365355)
3. Yadav A, Neelam Yadav, Divjot Kaur, Akhilesh Kumar, Kritika Yadav, Amit Kumar, Ali A Rastegari, Shashwati Ghosh Sachan, Bhanumati Singh, V. S. Chauhan and Anil

- Kumar Saxena. (2019) Bacterial community composition in lakes. In: Fresh water Microbiology, 1-71, Academic Press (ISBN: 9780128174951)
4. Yadav A, Divjot Kaur, Kusam lata Rana, Neelam Yadav, Bhanumati Singh, V S Chauhan, Ali Asghar Rastegari, Abd-EL- Latif Hesham and Vijai kumar Gupta (2019) Metabolic engineering to synthetic biology of secondary metabolites production. In: New and future developments in microbial biotechnology and bioengineering, 279-320, Elsevier. (ISBN: 9780444635044)
 5. Divjot Kour, Kusum Lata Rana, Neelam Yadav, Ajar Nath Yadav, Ashok Kumar, Vijay Singh Meena, Bhanumati Singh, Vinay Singh Chauhan, Harcharan Singh Dhaliwal and Anil Kumar Saxena (2019). Rhizospheric Microbiomes: Biodiversity, Mechanisms of plant growth promotion, and Biotechnological applications for Sustainable Agriculture. In: Plant growth promoting Rhizobacteria for agriculture sustainability, From Theory to Practices. 19-65, (ISBN: 978-981-13-7553-8) Springer Nature Singapore Pvt Ltd.
 6. **Singh B.** and Chauhan V.S. (2010) DNA Microarray-A Robotic Technology. **Recent Trends in Microbial Biotechnology: Techniques in Microbiology.** (A book edited by Dr. Vivek Vajpai, Pallavi Sharma and Dr. Vijai Kumar Gupta and Published By Lambert Academic Publishing Co. Germany. (ISBN 3843390029)
 7. Singh S., Pandey P.K., Chauhan V.S., **Singh B.**, Saxena R.K. and Bisen P.S. (1999) Nitrogen Metabolism in cyanobacterium. **Phycology: principles, Processes and Applications** (A Book edited by A.S. Ahluwalia and Published by Daya Publishing House) 68-90.(ISSN 1790-5125)

Webinars attended during CoVid-19 lockdown:

1. Participated in International Webinar on Epidemiology, Detection, Treatment, Transmission and Comparative Genomics of SARS-CoV-2 and Managing Personal and Professional Life during COVID-19 Pandemic and Lockdown on 23 August 2020 organised by Association of Microbiologists of India, Hissar unit.
2. Participated in International Webinar on “Translation Regulation in Eukaryotes: The role of Regulatory Networks and RNA Epi transcriptome” during COVID-19 Pandemic and Lockdown on 11 October 2020 organised by Association of Microbiologists of India, Hissar Unit.
3. Participated in International Webinar on “Jumping of Viruses from one species to another” during COVID-19 Pandemic and Lockdown on 06 September 2020 organised by Association of Microbiologists of India, Hissar Unit.
4. Participated in International webinar on Advances in diagnosis and control of microbial outbreaks on 20 June 2020 jointly organized by Department of Pharmacy and Department of Biotechnology Barkatullah University, Bhopal.
5. Participated in National webinar on Strategies of research in changing landscape of the education system on 16 June 2020 organized by Department of Education, Bundelkhand University, Jhansi.
6. Participated in National webinar on Educational Policy 2020: Towards global Best teaching learning processes on 07 September 2020 organized by Department of Education, Bundelkhand University, Jhansi and sponsored by Department of Higher Education, Uttar Pradesh.

7. Participated in Webinar on Distance and digital learning organized by Ashok and Rita institute of integrated study and research in Biotechnology and Allied Sciences affiliated to CVM University, Gujarat on 11 May 2020.
8. Participated in Webinar on SARS-CoV2: an old virus in new coat organized by Ashok and Rita institute of integrated study and research in Biotechnology and Allied Sciences affiliated to CVM University, Gujarat on 13 May 2020.
9. Participated in Webinar on Key aspects of patenting organized by Ashok and Rita institute of integrated study and research in Biotechnology and Allied Sciences affiliated to CVM University, Gujarat on 19 May 2020.
10. Participated in International webinar on Impact of natural Bioactive compounds for the treatment of CoVid-19: diagnostic challenges and futuristic perspectives organized by Hericure Healthcare group, Pune in association with University of KwaZulu-Natal, Durban, South Africa on 30-31 May 2020.
11. Participated in International Webinar on Microbiomes, immunity and vaccine & Probiotic diary foods in modulating Human health and well being during COVID-19 Pandemic and Lockdown on 20 September 2020 organised by Association of Microbiologists of India, Hissar Unit.
12. Participated in Indo-Iranian Webinar on Evolving perspectives of Covid-19:Health and global landscape organized by Institute of Health Sciences, CSJM University, Kanpur in association with Swami Vivekanand Cultural Centre, Embassy of India, Tehran, Iran on 30 May 2020.
13. Participated in National Webinar on Contemperory issues on Biosciences organized by School of Life Sciences, Mahatma Gandhi Central University, Motihari on 4 August 2020.
14. Participated in International webinar on Unwinding complexity of COVID-19-an in silico attempt organized by Department of Biotechnology, Institute of Engineering and Technology, Bundelkhand University, Jhansi and sponsored by TEQIP-3 on 03 June 2020.
15. Participated in National webinar on Dimensions and Degrees of Higher Education organized by Department of Biotechnology, Institute of Engineering and Technology, Bundelkhand University, Jhansi and sponsored by TEQIP-3 on 23 May 2020.
16. Participated in National webinar on Global Lockdown: Climate change and sustainable environmental solutions organized by Department of Biotechnology, Institute of Engineering and Technology, Bundelkhand University, Jhansi and sponsored by TEQIP-3 on 25 May 2020.

Seminar/Conferences/Workshop attended by Dr. Bhanumati Singh

1. Participated in IP Awareness and Training Program Under National Intellectual Property Rights Awareness Mission, 14 July 2022 organised by Intellectual Property office, Govt of India.
2. Participated in International Webinar On Challenges and Strategies for Conservation of Natural Resources Organised by Department of Botany, GPGC Nagnath, Chamoli, Department of Applied Sciences, University of Tech and Applied Sciences, Muscut, Oman and Department of Botany, BU Jhansi on 06 June 2022.

3. Participated in Webinar on Downstream Processing of Microbial Products from Biological Mixture organized by AMI under Skill enhancement campaign on 26 May 2022.
4. Participated and got certificate of appreciation for best interjection in two day online workshop on Art of scientific writing, communication and Basics of computational Biology organized by International Society for Microbial Ecology in association with Phixgen Pvt. Ltd. Held on 13-14 June 2022
5. Participated in Online Certificate Course in Recombinant DNA Technology (Batch XX) organized by CG Bhakta Institute of Biotechnology, UKA Tarsadia University, Bardoli, Gujarat from 13-23 June 2022
6. Participated in National Workshop on Future Scopes in Dairy Microbiology organized by Dairy Microbiology Department, SMC College of Dairy Science, Kamdhenu University, Gujarat on 04 June 2022
7. Participated in one week National e-workshop on Innovation and IPR organized by CSIR-Institute of Minerals and Materials Technology, Bhubaneswar on 13-18 June 2022
8. Attended national conference on Resilience and Resource Management including ICT for sustainable Agriculture and Biotechnology, 23-24 Feb 2019 organised by Dr. Bhim Rao Ambedkar University Agra and presented paper entitled A biogenic approach for green synthesis of Gold nanoparticles using peel extract of *Momordica charantia* and its antimicrobial activity.
9. Attended 106th Indian Science Congress on Future India: Science and Technology, 3-7 January, 2019 at Lovely Professional University and presented paper on antimicrobial and anticancerous activity of biofunctional Gold nanoparticles synthesized from *Citrus aurantifolia* peel extract.
10. Attended national conference on Current trends in plant science and Molecular Biology for food security and climate resilient agriculture jointly organized by Rajmata Vijayaraje Scindia Krishi Vishwavidyalaya, Gwalior and National Environmental Science Academy New Delhi 15-16 February 2018 and presented paper entitled “ Rapid Biosynthesis of gold nanoparticles using *Psidium guajava* peel extract and evaluation of its antimicrobial activities by Dr. V S Chauhan, Dr. Bhanumati Singh and Shiva Shirotiya.
11. Attended international conference on Science, Technology and Social Humanities, 26-28 February 2018 organised by Dept of Zoology in collaboration with society of Life Science, Satna and presented a paper entitled Biosynthesis of gold nanoparticles from biowaste and its antimicrobial activity.
12. Delivered talk as invited speaker in National conference on Current Scenerio and future trends in Biotechnology Biofuturity 2018 on Fascile Green Biosynthesis and characterization of silver nanoparticles by using *Carica papaya*.
13. Attended 104th Indian Science Congress at SV University, Tirupati and Presented poster entitled “ Air pollution in Jhansi: Air quality indexing and statistical data” between 3-7 January 2017
14. Attended National Symposium on “New directions in managing forage resources and livestock productivity in 21st century at Rajmata Vijayaraje Scindia Krishi Vishwavidyalaya (RVSKVV), Gwalior (M.P.) between 3-4 March 2017 and presented paper on ‘Evaluation of Oat (*Avena sativa*) accessions for morphological traits’

15. Delivered talk as invited speaker In “National Symposium on frontier in Biotechnology at RBS College, Agra on 5-6 March 2017” on Biofilms.
16. Attended National Conference on “Biotechnology: Resource management for sustainable nature in 21st century” at BBAU, Agra (U.P.) between 22-23 April 2017 and delivered talk on “Biofilm”
17. Attended National conference on “Trends in nanobiotechnology” at TERI University, New Delhi between 28-29 September 2017 and presented paper entitled “Green synthesis of silver nanoparticles using *Momordica charantia* peel”
18. Attended workshop on “Radiochemistry and applications of Radioisotopes” organized by DAE-BRNS & IANCAS at Bundelkhand University, Jhansi Between 4-9 December 2017
19. Attended international conference on Recent Advances in Food Processing and Biotechnology, April 4-5, 2016 organised by Centre of Food and Science Technology, Institute of Agricultural Sciences, BHU, Varanasi.
20. Attended National workshop on Genomics and Proteomics in biomedical research organized by innovation center and Institute of Biomedical Sciences, Bundelkhand University, Jhansi, 17-20 March 2016
21. Attended International conference on recent advances in biotechnology and nanobiotechnology (int-bionano-2016) organized by Amity Institute of Biotechnology, Amity University, Gwalior, 10-12 Feb 2016
22. 6th International Conference on climate change and sustainable management of natural resources (TIMES-2016) organized by institute of Lifescience , ITM University, Gwalior, 11-13 Feb 2016
23. 5th International Conference on climate change and sustainable management of natural resources (TIMES-2015) organized by institute of Lifescience , ITM University, Gwalior, 9-11 Feb 2015
24. Attended one day training cum workshop on Antiplagiarism softwares:turnitin and iThenticate on 06 Dec 2014 organised by Bundelkhand University, Jhansi.
25. Attended a seven day faculty development programme held at Bundelkhand University, Jhansi, 1-7 sept 2014
26. 4th International Conference on climate change and sustainable management of natural resources (TIMES-2014) organized by institute of Life Science , ITM University, Gwalior, 12-14 Feb 2014
27. National conference on Biotechnology, Biodiversity and Environment at APS university Rewa, 19-20 April 2013 and presented a paper on Biofilms.
28. National seminar on Development and Evolution of Technical Terminology in Indian Languages, 27-29 April 2011, organized by Council for Scientific and Technical Terminology (CSTT), Vigyan Bhavan, New Delhi
29. International symposium on phycological Research, 25-27 February, 2010, organized by Banaras Hindu University, Varanasi.
30. National workshop on Original of Nanotechnology, 14 -15 March 2008, organised by Scientific and Technological Terminology Commission, New Delhi.
31. International Seminar on Biotechnology for today’s world, 02-03 December, 2008, organized by Department of Zoology, DBS College, Kanpur.

32. National Seminar on current status and importance of copyright and IPR issues, 27-28 December, 2008 organised by Jiwaji University Gwalior.
33. National Conference on “Immunology in Health and Disease” C.S.M.U., Kanpur (U.P.), Jan. 11-12, 2006
34. National Conference on recent trends in Molecular Biology, 27-28 Feb.-2006, Cancer Hospital & Research Institute, Gwalior (M.P.)
35. National Symposium on issues & challenges for Environmental Management; Vision-2025, 17-19 Feb.-2006, Department of Environmental Sciences, BBAU, Lucknow (U.P.)
36. Symposium on Disaster Research: For Environment & Human Security, May-19, 2006, Institute of Environmental Sciences, B.U., Jhansi (U.P.)
37. National Symposium on Emerging Trends in Plant Biology, Environmental Sciences & Biotechnology, 9-11 October-2006, Department of Botany, University College of Science, M.L.S. University, Udaipur (Rajasthan)
38. Eastern Zone Conference, 2006 organized By Indian Society of Mycology and Plant Pathology, Seminar on “Recent trends in diagnosis and management of Plant diseases” Department of Plant Pathology, Assam Agriculture University, Jorhat 785013, Assam
39. AMI conference on frontiers in fungal Biotechnology at Department of Biotechnology, Barkatullah University, Bhopal (M.P.) between 06.12.06 to 09.12.2006.
40. National conference on Immunology in health and Disease 2006, Jan11-12, 2006, organized by Institute of Life Sciences, CSJM University, Kanpur.
41. International Conference on Recent trends on Therapeutics, Institute of Biomedical Sciences, B.U., Jhansi (U.P.), Jan.-2005
42. International Conference on recent trends in Biomedical-Sciences, B.U., Jhansi (U.P.), Jan.-2004
43. National Conference on Bioinformatics at Institute of Microbiology & Biotechnology, Barkatullah University, Bhopal (M.P.)2000