TECHNOLOGY TRANSFER TO INDUSTRY: 02

1. **Title**: A multipurpose low cost portable UV-C sanitization cabinet for home and office use.
   Product Name: UV-C sterilization cabinet, (Viralyser)
   Technology Transferred: Garg TelecomCorporation, 38, Monereco Industrial Estate, Prayagraj.
2. **Title**: Hand Gloves Removing Device
   Technology Transferred: Caremont LLP, Bangalore
   Product Name: Hand Gloves Removing Device

TECHNOLOGY TRANSFER AS PART OF SOCIAL RESPONSIBILITY: 02

1. **Title**: A low cost and disposable face shield
   Product Name: Viro Shield
   Transferred/Donated: Frontline corona warriors, Police and Local administration, Medical personnel and various stakeholders
2. **Title**: A mobile application
   Product Name: AMRIT (Assessment, Monitoring, Reporting and Intelligent Tracking)
   Transferred To: Prayagraj District Administration

PATENTS GRANTED: 01

1. Method of simultaneous detection of *E. coli* and *Salmonella* species by gold nanoparticle based lateral flow immunoassay. **Patent Num: 370213;** Application No: 3215/Del/2015

PATENTS FILED: 06

1. An improved anthropometrically designed face shield and a process thereof. Application No: 202011019565.
2. Hand gloves removing device, May 05, 2020, Application No: 202011019189.
3. A multipurpose low cost portable UV-C sanitization cabinet for home and office use. Application No: 202011018858.
4. A topical composition for treating fungal infections; Application No: 202111009000
5. A topical composition for treating bacterial infections; Application No: 202111009001
6. A composition for inhibiting the growth of fungi; Application No.: 202211031283

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1. AMRIT (Assessment, Monitoring, Reporting and Intelligent Tracking), 2020; 6951/2020-CO/SW

EXTERNALLY FUNDED PROJECTS

ONGOING RESEARCH PROJECTS: 03

Sl.No	Title	Funding Agency	Period	PI/Co-PI
1.	Investigating the role of nitric oxide and indole acetic acid releasing chitosan nanoparticles induced alleviation mechanisms	Council of Scientific and Industrial Research (CSIR); Govt. of India	03 Years	PI

	of chromium and metsulfuron methyl toxicity in rice and tomato			
2.	Design and Innovation Centre(Spoke)	Ministry of Education (MoE); Govt. of India	06 Years	PI
3.	GIS based mapping of microbial diversity across Ganges for ecosystem services	National Mission for Clean Ganga (NMCG), Govt. of India	02 Years	PI
4.	Establishment of Project Mentoring in Govt. Schools of Uttar Pradesh	Samagra Shiksha, Govt. of Uttar Pradesh		PI

***COMPLETED RESEARCH PROJECTS*: 14**

Sl. No	Title	Funding Agency	Period	PI/Co-PI
1	Studies on nanoparticles (FeO_2 and CuO NPS) mediated toxicity, tolerance mechanisms and their toxicity management in some susceptible and tolerant rice (*Oryza sativa* L.) varieties	Council of Scientific and Industrial Research (CSIR); Govt. of India	04 Years	PI
2	Bio-restoration technology based on the management of plant microbe soil interactions for the restoration of degraded ecosystems	Department of Biotechnology (DBT); Govt. of India	01 Year	PI
3	Harnessing PGPRs from Indo Gangetic Plain Region of Uttar Pradesh for Growth Promotion and Disease Suppression in Rice and Pigeonpea	Department of Biotechnology (DBT); Govt. of India	03 Years	PI
4	Microbial profiling in Gangetic river system and development of a gold nanoparticle based multiplex lateral flow immunoassay for bacterial detection	University Grants Commission; Govt. of India	03 Years	PI
5	Environment restoration using plant microbe interaction: Rhizoremediation.	Ministry of Environment and Forest, Govt. of India (GBPIHED) ; Govt. of India	Three Years	PI
6	Assessment of Bacterial diversity of Gangetic river system of Uttarakhand using molecular approaches.	Department of Science and Technology (UCOST), Govt. of India.	02 Years	PI
7	Microbial Diversity: Indicator of pollution in Gangetic river system of Uttarakhand	Department of Science and Technology (UCOST), Govt. of India.	01 Year	PI
8	Startup Centre	Department of Science and Technology (DST) and Ministry Education (MOE); Govt. of India	03 Years	PI
9	Delineating the role of nano-herbal composites in ergosterol biosynthesis inhibition in dermatophytes.	Department of Science and Technology (DST); Govt. of India	03 Years	Mentor
10	Study to investigate the therapeutic efficacy of CD5 blocking in treatment of T cell lymphoblastic leukemia	Department of Biotechnology (DBT); Govt. of India	03 Years	Co-PI

11	Study of role of lactone signalling and alginate production on neutrophil interaction, apoptosis, and subsequent macrophage mediated phagocytosis against *Pseudomonas aeruginosa*Biofilm associated infection	SERB, Department of Science and Technology (DST); Govt. of India	03 Years	Co-PI
12	Identification of novel epigenetic biomarkers through next generation sequencing technologies towards developing a multiplex methylight assay for early diagnosis of epithelial ovarian cancer	Indian Council of Medical Research (ICMR); Govt. of India	03 Years	Co-PI
13	Utilizing rhizosphere technology for bio restoration of degraded Land	TEQIP -II	15 Months	PI
14	Study of rhizospheric interactions for sustainable agriculture	TEQIP -II	01 Year	PI

***COMPLETED TESTING & CONSULTANCY PROJECTS*: 01**

Sl. No	Title	FundingAgency	Period	PI/Co-PI
1.	Enhanced natural attenuation for in situ Nallah treatment of Jhusi area, Prayagraj	State Mission for Clean Ganga; Govt. of India	01 Year	PI

***COMPLETED INTERNALLY FUNDED PROJECT UNDERTAKEN*: 01**

SI.No.	Project Title	Funding Agency	Status
1	Rhizosphere Technology: An Approach for Bioremediation	MNNIT, Allahabad	Completed

CONFERENCE ORGANISED: 07

S.No.	Title	Funding Agency	Date	As
1	BioSangam 2022 Emerging Trends in Biotechnology *International Conference*	Nil	March 10-12, 2022	Organizing Secretary
2	BioSangam 2020 :Biotechnological Interventions for Societal Development *International Conference*	• Council of Scientific and Industrial Research (CSIR) • Science and Engineering Research Board Department of Science and Technology (SERB DST), Govt. of India • TEQIP III	February 21-23,2020	Organizing Secretary
3	BioSangam 2018: Innovations and Translational Dimensions *International Conference*	• Council of Scientific and Industrial Research (CSIR) • Department of Science and Technology (DST) • TEQIP III	March 9-11, 2018	Chairman
4	BioSangam 2016:Translational	Various Govt. Agencies	February 4-6,	Coordinator

	Biotechnology *International Conference*		2016	
5	Mechanics and Manufacturing of Multifunctional Materials and Structures *International Conference*	• TEQIP-II	December 27-29, 2014	Treasurer
6	BioSangam 2013: Health, Environment and Industrial Biotechnology *International Conference*	• Indian council of Medical Research (ICMR) • Council of Scientific and Industrial Research (CSIR) • Defense Research and Development Organization • Indian National Science Academy • Board of Research in Nuclear Medicine	November 21-23, 2013	Convener
7	Bioprospecting: Access for Sustainable Development *National Conference*	• Department of Biotechnology (DBT) • Indian council of Medical Research (ICMR) • Council of Scientific and Industrial Research (CSIR) • Department of Science and Technology (DST) • Ministry of Environment and Forest	February 19-20, 2010	Organizing Secretary
8	Microbial Diversity: Avenues and Applications *National Conference*	• Council of Scientific and Industrial Research (CSIR) • Department of Biotechnology(DBT) • Indian National Science Academy Uttarakhand Council for Science and Technology (UCOST)	March17-18, 2007	Organizing Secretary

SHORT TERM TRAINING COURSE / WORKSHOP ORGANIZED AS CONVENER / COORDINATOR: 12

S. No.	Title	Funding	Date
1	Biotechnological interventions for societal development	TEQIP II and R&C, MNNIT Allahabad	March 21-23, 2017
2	Advances in Biosciences and Bioengineering	TEQIP II	October 19-25, 2016
3	Current Advances in Biotechnology	TEQIP II	October 13-19, 2016
4	Motivational Science Learning Camp	Department of Science & Technology, Govt. of India	February 17-21,2016
5	DNA Sequencing: Applications in Diagnostics and Health Care Innovation"	Self-Financed	December 8-14, 2015
6	Flow Cytometry: Application in Research, Diagnostics and Health Care Innovation	Self-Financed	December 15-21, 2015
7	Biotechnology, IPR and Entrepreneurship	Self-Financed	January 14-18, 2015

8	Biotechnology, Health and Diagnostics	Self-Financed	January 24-28, 2015
9	Human Health and Environmental Sustainability	Self-Financed	June 4- 8, 2013
10	Frontiers in Biotechnology	Self-Financed	May28 –June 1, 2013
DIC Events organized as a Coordinator, Spoke			
11	DIC meet of all spokes (MNNIT Allahabad, IIIT Allahabad, Allahabad University) of IIT BHU and BHU Varanasi was organized under the scheme "National Initiative for Design Innovation" at MNNIT Allahabad	Ministry of Human Resource Development(MHRD)	February 07, 2020
12	One day exhibition on the products and prototypes	Ministry of Education (MoE)	November 26, 2019

GIAN (GLOBAL INITIATIVE OF ACADEMIC NETWORKS) ORGANISED AS CONVENER/PRINCIPAL COORDINATOR: 03

S.No.	Title	Funding Agency	Date	As
1	Interface between Nanoparticles and Living Systems: Ethical and Translational Dimension	Ministry of Education (MoE), Government of India	July 15-26, 2019	Principal Coordinator
2	Emerging Bio photonics Solutions for Disease Diagnosis	Ministry of Education (MoE), Government of India	April 1-12, 2019	Principal Coordinator
3	Genomics, Personalized medicine and Ethics	Ministry of Education (MoE), Government of India	July 31-August 11, 2017	Principal Coordinator

AICTE Training and Learning *(*ATAL*)* Academy COURSE ORGANISED AS PRINCIPAL COORDINATOR: 01

S.No.	Title	Funding Agency	Date	As
1	Rhizopsheric Engineering: Revisiting the Microbe Plant Synergy to mitigate Plant Nano Toxicology	All India Council of Technical Education	Jan 24-28, 2022	Principal Coordinator

VISIT ABROAD: 07

S. No.	Country visited	Duration	Purpose of visit
1	Spain	November 28- December 1, 2007	International Conference on Environmental, Industrial and Applied Microbiology.
2	Nepal	March 3-7, 2008.	International Conference on Rivers in Hindu Kush Himalaya – Ecology and Environment Assessment
3	Germany	December 1-3, 2010	International Conference of Biodiversity
4	Switzerland	June 26-30, 2011	International Conference of Microbiology i.e. FEMS 2011.
5	United Kingdom	June 1-2, 2014	International Conference on Advances in Bio-Informatics,Bio-Technology and Environmental Engineering
6	France, Italy	September 27-October 6, 2014	Networking Trip
7	Valencia, Spain	July 09-13, 2017	FEMS 2017- 7thCongress of European Microbiologists (International Conference)

RESEARCH SUPERVISION (Ph.D. Completed): 14

S.No	Name of Student	Ph.D. Thesis	Status	Year
1	Ms. Anchal Sood	Assessment of bacterial diversity in Ganga river system in Uttarakhand	Awarded	2010
2	Mr. Sandeep Bisht	Role of plant microbe interactions in Rhizoremediation	Awarded	2011
3	Mr. Keshav Prasad Shukla	Rhizospheric bacterial diversity of *Calotropis*spp and their use in Rhizoremediation	Awarded	2012
4	Ms. Vasudha Singh	Prospecting of medicinal plants in tribal area of central India for agricultural bioactivity.	Awarded	2013
5	Ms. Shikha Devi	Exploring rhizospheric bacterial diversity of rice for plant growth promotion, disease suppression and potential application in sustainable agriculture	Awarded	2016
6	Ms. Jyoti Singh	Harnessing bacterial diversity of Gangetic river system and development of nanogold based immunoassay for multiplex detection of prevalent bacterial species	Awarded	2016
7	Mr. Ashish Tiwari	Harnessing plant microbe interaction for plant growth "promotion and biocontrol in the pigeonpearhizosphere	Awarded	2016
8	Ms. Neha Upadhyay	Deciphering plant microbe soil interaction for reclamation of degraded soil ecosystem	Awarded	2018
9	Mr. Pankaj Verma	Role of Vitamin A in Immune response against*Leishmaniadonovani*	Awarded	2018
10	Mr. Nitin Kumar	Investigating the Potential of Gold Nano-Rods in Diagnosis of Ovarian Cancer	Awarded	2018
11	Ms. Kanchan Vishwakarma	Deciphering the Rhizospheric Bacterial Diversity and Root Exudates in *Brassica*spp:Access for Sustainable Agriculture	Awarded	2019
12	Mr. Rishi KumarVerma	Gene expression profiling through next generation sequencing in rice colonized by plant growth promoting rhizobacteria	Awarded	2020
13	Mr. Jaspreet Singh	Development and Evaluation of herbal formulation for topical applications against fungal infections	Awarded	2021
14	Ms. Shruti Jain	Deciphering the mitigation of herbicide induced toxicity through silicon application in wheat (*T. aestivum*) seedlings	Awarded	2021

RESEARCH SUPERVISION (Ph.D.) ONGOING : 07

S.No	Name of Student	Ph.D. Thesis	Status
1	Mr. Ved Prakash	Assessment of engineered nanoparticles on rhizospheric bacterial diversity of Rice (*Oryza sativa*)	Thesis Submitted
2	Ms. Padmaja Rai	Investigating the role of Iron oxide and Copper oxide nanoparticles in rice (*O. sativa* L.): Delineating phytotoxicity, defense mechanisms and toxicity management	Ongoing

3	Ms. Sneha Tripathi	Interactive role of Silicon and Rhizobacteria in mitigating Silver nanoparticles and Aluminium induced stress in Rice (*Oryza sativa*)	Ongoing
4	Mr. Samarth Sharma	Harnessing the synergy between *Brassica juncea* and associated Rhizobacteria in Gangetic Riparian Zone to alleviate abiotic stress	Ongoing
5	Ms. Kavita Tiwari	Assessment of carrier mediated auxin delivery system on endogenous phytohormone regulation and abiotic stress tolerance in rice(*Oriza sativa)*	Ongoing
6	Ms. Shivani Mahra	Environmental Biotechnology/Plant Stress Biology	Ongoing
7	Ms. Preeti Vishwakarma	Environmental Biotechnology	Ongoing

SUPERVISION FOR M.TECH. STUDENTS: 14

S.No	Name of student	Branch	Year	Status	Title of Dissertation
1	Mr. Madhav Arya	M. Tech. Biotechnology	2012	Completed	Impact of mass bathing on physico-chemical quality of water and resistance profile of prevalent bacterial isolates in Sangam
2	Ms. RitikaPrashar	-do-	2013	Completed	Impact of mass bathing on bacteriological water quality of Sangam
3	Mr. Nitin Kumar	-do-	2013	Completed	Assessment of soil Bacteria Associated with paddy soil for plant growth promotion and biocontrol potential
4	Ms. BeenaTarar	-do-	2013	Completed	Analysis of bacterial diversity isolated from different PAH contaminated sites of Calotropis rhizosphere by RAPD marker
5	Ms. Neha Upadhyay	-do-	2013	Completed	Screening of bacterial isolates associated with rice Rhizosphere for direct plant growth promotion activities in vitro
6	Mr. ShobhitVerma	-do-	2014	Completed	Harnessing Rhizobacteria of *Acacia catechu* and *Diospyrosmelanoxylon* from Coal Mine Dumps of Sonebhadra (U.P.) and their utilization for Biorestoration Studies
7	Ms. Kanchan Vishwakarma	-do-	2015	Completed	Studies on relationship of soil enzymatic activities, microbial biomass and organic carbon storage with respect to climatic parameters
8	Mr. Rahul Tripathi	-do-	2016	Completed	Molecular cloning and over-expression of lignin biosynthesis pathway genes
9	Mr. Arun Kumar M	-do-	2017	Completed	Investigation of antimicrobial preparation from essential oil of *Trachyspermumammi* for topical application
10	Ms.Aishwarya Sharma	-do-	2018	Completed	Alleviation of Chromium phytotoxicity by

					exogenous application of Silica Nanoparticles in Rice (*Oryza sativa*) seedlings
11	Mohd. Younus khan	-do-	2019	Completed	Regulation of Cd toxicity in tomato and brinjal through IAA with special emphasis on ROS detoxification.
12	Ms. Paulomi Roy	-do-	2020	Completed	Role of nitric oxide in mitigating Nanoceria induced phytotoxicity in tomato seedlings: A study involving antioxidant defense system
13	Ms. Seethalakshmi S.	-do-	2021	Completed	Computational studies to identify pharmacologically active short peptides from probiotic bacteria
14	Ms. Shubhangi Suri	-do-	2022	Completed	*In Silico* and *In Vitro* Design of an Anti-Folliculitis Formulation: A Herbal Medicine Based Approach
15	Ms. Victoria J	-do-	2023	Completed	Alginate chitosan biopolymer: An efficient carrier for the encapsulation and effective delivery of metsulfuron methyl

SUPERVISION FOR MASTER OF SCIENCE STUDENTS: 28

S.No	Name of student	Branch	Year	Status	Title of Dissertation
1	Mr. Naveen Sharma	Microbiology	2003	Completed	Efficacy of various Rhizobium strains of different forest tree species in *Albizialebbeck*
2	Ms. Nidhi Gaur	do-	2003	Completed	Bacteriological quality of drinking water around Dehradun.
3	Mr. Varun Guleria	-do-	2003	Completed	Comparative performance of various inoculants under artificial moisture stress in two important nitrogen fixing tree species.
4	Ms. Shweta Lal	-do-	2003	Completed	Comparative profile of various naturally occurring water bodies around Dehradun.
5	Ms. Aishwarya Sharma	-do-	2004	Completed	Study of diversity pattern among rhizobial strains of *Acacia catechu*.
6	Mr. Himanshu Kulshrestha	do-	2004	Completed	Impact of mass bathing during ArdhKumbh on water quality status of river Ganga at Hardwar.
7	Ms. RupinderChahal	-do-	2004	Completed	Effect of microbial inoculants on germination and initial seedling growth in *Albizialebbeck*.
8	Ms. PoonamSharma	-do-	2004	Completed	Allelopathic potential of *Brassica*on Wheat: A plant microbe interaction.
9	Mr. Lalit Kumar	-do-	2004	Completed	Bacteriological analysis of drinking water for human consumption used by rural community around Dehradun
10	Mr.KamaldeepSingh	-do-	2005	Completed	Microbial decolorization and bioremediation of melanoid in containing molasses spent wash
11	Ms. AparajitaDwivedi	-do-	2005	Completed	Performance evaluation of water purification system for ground water supply around Dehradun.
12	Mr. AyushKothiyal	-do-	2005	Completed	Assessment of bacteriological quality and aspect

					of pollution along a stretch of river Ganga inGarhwal Himalayas.
13	Mr. Bal KrishanMishra	-do-	2005	Completed	Importance of synovial fluid analysis in the diagnosis of arthritis and allied conditions
14	Mr. Vinay Kumar Tyagi	-do-	2005	Completed	Microorganisms in wounds:characterization, prevalence and resistance profile
15	Ms. AnchalSood	-do-	2006	Completed	Tea rhizosphere: Dominant bacteria, their interaction and role as biocontrol agent.
16	Ms. Suchi Singh	-do-	2006	Completed	Studies on rhizospheremycoflora of tea (*Camellia sinensis*): Interaction with dominant bacteria.
17	Ms. HarpreetKaur	-do-	2006	Completed	Assessment of bacteriological quality and aspect of pollution along a stretch of river Yamuna at Paonta Sahib
18	Mr. GauravTomar	-do-	2006	Completed	Allelopathic potential of poplar on different varieties of wheat: A plant microbe interaction.
19	Ms. NavjeetKaur	-do-	2006	Completed	Studies on seed borne microflora of *Cassia fistula*.
20	Ms. RashmiSharma	-do-	2006	Completed	Quality of drinking water: A case study around Dehradun
21	Mr. SandeepBisht	-do-	2007	Completed	Studies on biological treatment of digested distillery spent wash.
22	Ms. Vasudha	-do-	2007	Completed	Studies on tea rhizosphere, characteristic features and potential applications.
23	Ms. Archana Sati	-do-	2007	Completed	Evaluation of bacteriological quality and pollution along the stretch of Alaknanda and Bhagirathi rivers in Garhwal Himalayas.
24	Ms. Poonam Sharma	-do-	2007	Completed	Assessment of water quality and pollution in some important lakes of North India.
25	Mr. Rakesh Bisht	-do-	2008	Completed	Microbiological Analysis of Milk quality with special reference to coliforms
26	Ms. Vijayata	-do-	2008	Completed	Assessment of genetic diversity among bacterial strains in Lake Riwalsar using amplified ribosomal DNA restriction analysis technique
27	Ms. PallaviChauhan	-do-	2008	Completed	Utilizing PGPR and Cyanobacteria for enhanced crop and soil productivity of rice cropping system
28	Ms. Priya Gupta	-do-	2008	Completed	Assessment of genetic diversity among bacterial strains in Lake Prashar using amplified ribosomal DNA restriction analysis technique

SUPERVISION FOR B.TECH.STUDENTS SINCE LAST FIVE YEARS:

Sl. No.	Title of Dissertation/Project	Branch	Co-Supervisor[s], if any	Year

1	Interactive voice response (IVR) based direct monitoring of drug adherence among tuberculosis patients	Biotechnology	Dr. Ambak Kumar	2015-16
2	Computational studies on interaction of *Mycobaterium tuberculosis* proteins	Biotechnology	–	2016-17
3	Evaluation of Toxicity of CuO NPs on rice (*Oryza sativa*) seedlings	Biotechnology	–	2017-18
4	Assessment of bacterial diversity associated with mobile phones.	Biotechnology	–	2018-19
5	Computational studies to identify potential inhibitors of Type II Secretion System in pathogenic bacteria	Biotechnology	–	2019-20
6	BioLinker	Biotechnology	–	2020-21
7	Development of machine learning model to predict drug response parameter: *In silico* aqueous solubility prediction	Biotechnology	-	2021-22
8	Comparative study of early stage diabetes risk prediction models	Biotechnology	-	2022-23

POST DOCTORAL FELLOWS MENTORED: 02

MEMBERSHIP OF PROFESSIONAL SOCIETIES

- Life Member, Association of Microbiologist of India
- Life Member, Indian Association of Agriculture Biochemist
- Life member, Society for Environmental Sustainability

HONOURS, AWARDS, FELLOWSHIPS AND OTHER RECOGNITIONS

- Awarded with Springer - Society Award for Excellent Contribution
- Associate Editor, Plant Nano Biology [Elsevier]
- Associate Editor, Environmental Sustainability [Springer]
- Guest Editor, special issue in Journal of Biotechnology [Elsevier]
- Guest Editor for Plant Gene, special Issue on 'Innovations and Translational Dimensions in Agricultural and Environmental Biotechnology'[Elsevier]
- Member, Research Committee, Department of Biotechnology, Kumaun University Nanital.
- Member, Board of Studies (Biotechnology), Ewing Christian College, University of Allahabad
- Member Board of Studies (Biotechnology), JNTU Hyderabad during 2013-2015.
- Member, Senate, MNNIT Allahabad
- Member, Board of Academics (Biotechnology), MNNIT Allahabad
- Member IPR Standing Committee, MNNIT Allahabad
- Member Research & Consultancy Core Committee, MNNIT Allahabad
- Best paper award for the research work presented in International Conference on Advances in Bio-Informatics, Bio-Technology and Environmental Engineering held in London on June 1-2, 2014.
- International Travel award by Department of Science and Technology, GOI and CCTDS for attending International Conference on Environmental, Industrial and Applied Microbiology.
- Nominated by Govt. of Uttarakhand in a scientific delegation [for Biotechnology]
- Awarded Merit scholarship by University during post-graduation studies.

- Qualified National Eligibility Test -2001

PROFESSIONAL/ADMINSTRATION ACTIVITIES / EXPERIENCE

- Prof. In charge, Training and Placements [April 2022 – Continue]
- Head, Department of Biotechnology [2012-2014 & 2016-2018]
- Associate Dean (Faculty Welfare) [2018-2020]
- Officer on Special Duty [2014-2022]
- Central Public Information Officer [2015-Till date]
- Incharge, Executive Development Centre [2014-2022]
- Member, IPR Standing Committee [2014-Till date]
- Convener, Institution Innovation Council [2018-Jan 2023]
- Member Research and Consultancy Committee and Press & Media Cell
- Convener/Coordinator, Centre for Promoting Innovation/Design Innovation and Incubation Centre [2014-2018]
- Convener/Coordinator, Centre for Medical Diagnostic and Research [2014-2018]
- President, Student Activity Centre [2011-2016]
- Faculty Incharge, Institute Central Library [2010-2016]
- Faculty Incharge -Institute Health Centre [2011-2014]
- Served as Faculty Incharge –Student Activity Centre
- Served as Warden in Charge – Tagore Hostel
- Served as Convener, Department Post Graduate Committee
- Served as Member, various Department Committees
- Served as OC Biotechnology Laboratory

TEACHING INTEREST

- *Microbiology, Environmental Biotechnology, Food Technology, Agro-biotechnology, IPR, Microbes & health.*

COMPUTER PROFICIENCY

- Proficiency in basic IT skills

EDITORIAL COMMITTEE MEMBERS OF NATIONAL / INTERNATIONAL JOURNALS

- **Associate Editor**, Plant Nano Biology [Elsevier]
- **Associate Editor**, Environmental Sustainability [Springer]
- **Guest Editor**, *Plant Gene*, Special Issue on 'Innovations and Translational Dimensions in Agricultural and Environmental Biotechnology'.
- **Guest Editor**, Journal of Biotechnology, Special issue.[Elsevier]
- Served as External examiner for PhD Thesis review, reviewer in various National &International journals of repute and delivered invited talks in various short-term courses.

PUBLICATIONS IN RESEARCH JOURNALS:

1. Sharma, S., Rai, P., Prakash, V.,Tripathi, S.,Tiwari, K., Gahlawat, N., Tripathi, D.K. and **Sharma Shivesh**. 2023. Ameliorative effects of Si-SNP synergy to mitigate chromium induced stress in *Brassica juncea.* **Environment Pollution**. In Press. https://doi.org/10.1016/j.envpol.2023.122031 **[IF:8.9]**
2. Kandhol,N., Rai,P., Pandey, S., Singh, S., **Sharma, Shivesh**, Corpas,F.J., Singh, V.P., and Tripathi, D.K. 2023. Zinc induced regulation of PCR1 gene for cadmium stress resistance in rice roots. **Plant Science**. https://doi.org/10.1016/j.plantsci.2023.111783 **[IF: 5.2]**
3. Devi, S. **Sharma Shivesh**, Tiwari, S., Bhatt, A.K., Singh, N.K. and Singh, M and Kumar, A. 2023. Screening for multifarious plant growth promoting and biocontrol attributes in Bacillus strains isolated from Indo Gangetic soil for enhancing growth of rice crops. **Microorganisms**. DOI: 10.3390/microorganisms11041085. **[IF: 4.92]**

4. Tripathi, S.; Mahra, S.; J, V.; Tiwari, K.; Rana, S.; Tripathi, D.K.; Sharma, S.; Sahi, S. Recent Advances and Perspectives of Nanomaterials in Agricultural Management and Associated Environmental Risk: A Review. 2023. **Nanomaterials**.13, 1604. https://doi.org/10.3390/ nano13101604 **[IF: 5.3]**
5. Prakash, V., Tripathi, S., Rai, P., Singh, J., Jain, S., Roy, P., Tripathi, D.K.,& Sharma Shivesh. (2023). Engineered nanoparticles and their Impact of on rhizospheric bacterial community. In: *Microbial Biotechnology – for sustainable agriculture*, Springer Nature (Accepted)
6. Tripathi, D. K., Rai, P., Kandhol, N., Kumar, A., Sahi, S., Corpas, F. J., & **Sharma, Shivesh**, Singh, V. P. (2022). Silicon Palliates Chromium Toxicity through the Formation of root hairs in rice mediated by GSH and IAA. ***Plant and Cell Physiology*.** **[IF: 4.92]**
7. Tripathi, D. K., Kandhol, N., Rai, P., Mishra, V., Pandey, S., Deshmukh, R., & **Sharma, Shivesh**, Singh, V. P. (2022). Ethylene renders silver nanoparticles stress tolerance in rice seedlings by regulating endogenous nitric oxide accumulation. ***Plant and Cell Physiology***. **[IF: 4.92]**
8. Rai, P., Sharma, S., Tripathi, S., Prakash, V., Tiwari, K., Suri, S., & **Sharma, Shivesh**. (2022). Nanoiron: Uptake, translocation and accumulation in plant systems. ***Plant Nano Biology***, 100017.
9. Parveen, N., Kandhol, N., Sharma, S., Singh, V. P., Chauhan, D. K., Ludwig-Müller, J., & **Sharma, Shivesh,** Tripathi, D. K. (2022). Auxin crosstalk with reactive oxygen and nitrogen species in plant development and abiotic stress. ***Plant and Cell Physiology*.** **[IF: 4.92]**
10. Dhakate, P., Kandhol, N., Raturi, G., Ray, P., Bhardwaj, A., Srivastava, A., & **Sharma, Shivesh**, Tripathi, D. K. (2022). Silicon nanoforms in crop improvement and stress management. ***Chemosphere***, *305*, 135165**.** **[IF: 8.943]**
11. Kandhol, N., Singh, V. P., Ramawat, N., Prasad, R., Chauhan, D. K., **Sharma, Shivesh**., & Tripathi, D. K. (2022). Nano-priming: Impression on the beginner of plant life. ***Plant Stress***, *5*, 100091. **[IF:5]**
12. Rai, P., Singh, V. P., Tripathi, D. K., & **Sharma, Shivesh**. (2022). Iron oxide nanoparticles impart cross tolerance to arsenate stress in rice roots through involvement of nitric oxide. ***Environmental Pollution***, **[IF: 9.988]**
13. Prakash, V., Rai, P., Sharma, N. C., Singh, V. P., Tripathi, D. K., **Sharma, Shivesh**., & Sahi, S. (2022). Application of zinc oxide nanoparticles as fertilizer boosts growth in rice plant and alleviates chromium stress by regulating genes involved in regulating oxidative stress. ***Chemosphere*,** 134554 **[IF: 8.943]**
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BOOK CHAPTERS [26]:

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2. Tripathi, S., Sharma, S., Suri, S., Tripathi, K., Rana, S., Tripathi,D.K.,& Sharma Shivesh. 2023. Insights into the Physiological and Molecular Responses of Plant to Metal Nanoparticle Stress. In: *Molecular and Physiological Insights into Plant Stress Tolerance*, Bentham Science.(Accepted)
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BOOKS / PROCEEDINGS:

Sl. No	Title	Editors/Type	Publisher & ISSN/ISBN No
1.	Beneficial Chemical Elements of Plants: Recent Developments and Future Prospects	Pandey, S., Tripathi, D. K., Singh, V. P., **Sharma, Shivesh**., & Chauhan, D. K.	**John Wiley & Sons Ltd.** ISBN:9781119691419 |DOI:10.1002/9781119691419 © 2023
2.	Plant Life under Changing Environment. Responses and Management	Tripathi, D. K., Singh, V. P., Chauhan, D. K., **Sharma, Shivesh**., Prasad, S. M., Dubey, N. K., & Ramawat, N. (Eds.).	**Academic Press**, 2020 ISBN: 9780-1281-82055 2020
3.	Nanomaterials in Plants, Algae, and Microorganisms, Vol-2	Tripathi DK, Ahmad P, **Sharma Shivesh**, Chauhan DK, Dubey NK (Eds.)	**Elsevier** (Academic Press) ISBN: 9780128114889 2018
4.	Nanomaterials in Plants, Algae, and Microorganisms, Vol-1	Tripathi DK, Ahmad P, **Sharma Shivesh**, Chauhan DK, Dubey NK (Eds.)	**Elsevier** (Academic Press) ISBN: 9780128114872, 2017
5.	Probiotics in Agroecosystem	Kumar, V., Kumar, M., **Sharma, Shivesh**., Prasad, R. (Eds.)	**Springer** ISBN: 978-981-10-4059-7 2017
6.	Probiotics and Plant Health	Kumar, V.,Kumar, M.,**Sharma, Shivesh**., Prasad, R. (Eds.)	**Springer** ISBN: 978-981-10-3473-2 2017
7.	Harnessing Traditional Knowledge of Medicinal Plants of Baiga Tribe: Tapping Traditional Knowledge of Tribal Areas of Central India: A Case Study	Vasudha Singh and **Sharma Shivesh**	**Lambert** Academic Publishing, Germany, ISBN:3659279536, 9783659279539 2012
8.	Health, Environment and Industrial Biotechnology	Proceeding of International Conference, Bio-Sangam	McGraw Hill Education (India) Pvt. Ltd. ISBN (13): 978-9-33-290137-7 ISBN (10): 9-33-290137-6
9.	Environment, Health and Industrial Biotechnology	Abstract Book International Conference, Bio-Sangam	Excellent Publishing House, New Delhi ISBN: 978-93-83083-41-1

INVITED LECTURE/TALKS/PANEL DISCUSSION/SESSION CHAIR/MODERATION [DURING LAST FIVE YEARS]

- Chaired session on Environmental Biotechnology during international conference on Emerging trends in Biotechnology on March 10, 2022.
- Delivered a lecture and conducted practical session during ATAL course on Rhizopsheric Engineering: Revisiting the Microbe Plant Synergy to mitigate Plant Nano Toxicology during Jan 24-28, 2022.

- Delivered invited talk during professional development programme on New Trends & Advancements in Bioengineering on November 27, 2021.
- Moderated a session during National Online Seminar on Roles and Responsibilities of Higher Technical Institutions in Effective implementation of National Education Policy 2020 on 16 October 2020.
- Delivered a talk during National Workshop on Forestry Interventions in Eco-Rehabilitation on March 3, 2020.
- Part of Panel Discussion on Innovation, Design and Entrepreneurship during DIC Meet on 7 February 2020.
- Talk on DIC activities at IIT BHU on 28 June 2019.
- Conducted sessions as well as practical session during Two-week GIAN course on "Interface between Nanoparticles and Living Systems: Ethical and Translational Dimensions" at MNNIT Allahabad during July 15-26, 2019.
- Conducted various sessions in One Month Summer Training Programme in Biotechnology during May 28-June 24, 2018.
- Delivered a talk and conducted practical sessions during workshop/course entitled Current Advances in Applied Biotechnology and Advances in Bioscience and Bioengineering
- Delivered a talk during course entitled Research methodologies, Data Analysis and Stress Tolerance in plants during January 21-27, 2017.
- Participated and presented two papers (posters) in FEMS 2017 conference held at Valencia, Spain during July 9-13, 2017.
- Delivered a lecture during short term course on Genomics for Crop Improvement during December 2015.
- Delivered a talk and conducted sessions during workshop on DNA Sequencing : Applications in Diagnostics and Health Care Innovation" and Motivational Science Learning Camp.
- Delivered a talk and conducted sessions during workshop/course Flow Cytometry: Application in Research, Diagnostics and Health Care Innovation ;
- Presented DIC activities before Expert Panel on 5 August 2016 at BHU Varanasi
- Coordinated Ishan Vikas Programme an initiative of Ministry of Human Resource Development whereby ten engineering students from NIT Manipur were hosted at MNNIT Allahabad and conducted sessions.
- Participated in two day workshop being organized at IIT Bombay during April 18-19, 2016 and presented the report.
- Participated in "Brainstorming and Experience Sharing Workshop" organized by IIT Delhi on October 17, 2015.
- Delivered a talk during National Workshop on Inspiration for Research organized by Department of Chemistry.
- Delivered a talk during Self Financed Short Term Course on "Fermentation Technology"
- Delivered a talk during Self Financed Short Term Course on "Plant and Enzyme Technology"
- Delivered a talk on "Forestry Interventions for Ganga: Role of Microbes" during 'First Consultation Meeting' for the State of Uttarakhand, organized by CSFER, Allahabad.

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