Faculty Details proforma for DU Web-site



(01 July 2020)

(PLEASE FILL THIS IN AND Email it to websiteDU@du.ac.in and

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		Vandere		Michae	
Title Dr.	First Name	Vandana	Last Name	Mishra	Photograph
Designation	Assistant Pro		<u> </u>		
Address	Laboratory o Biotechnolog	f Bioresourc Jy,	ental Studies, es & Environn -110 007, INDI/		
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Web-Page	Under construc	ction			
Educational Qualificatio	ns				
Degree	Institution				Year
Ph.D.	University of D				2005
M.Sc. Botany	University of D				1999
B.Sc. (H) Botany	University of D	Delhi			1997
Career Profile					
Assistant Professor, Stage III Assistant Professor, Stage II Assistant Professor, Stage I	(2009–2014), Un 2005–2009), Uni	iversity of Del versity of Dell	ni		
Visiting Scientist, Massachus	setts Institute of	Technology, C	ambridge, USA (2011-2012)	
Administrative assignment	ents				
Coordinator, Ph.D. Course		2019)			
Coordinator, Syllabus Fo					
AECC-I Course in Environ			-OCF (2019)		
Nodal officer, MSc/MA A	-	-			
Coordinator, MSc/MA pr Doputy Superintend Example		-			
 Deputy Superintend Example Member of BRS, DRC, Put 			of Courses		
and other committees (t		ce, committee			
Areas of Interest / Speci	-				
Environmental Biotechno		pecting			
Subjects Taught,					
Post-Graduate Teaching	(M.Sc.)				
Introduction to E	Environment (2				
Ecotoxicology 8					
Methodologies i		al Sciences	(2014–)		
Pollution and He					
 Technology, Development & Society (2015–) Environmental Biotechnology (2006-2008; 2010-2011) 					
			2010-2011)		
 Cell Biology and Biodiversity and 					
Global Environm					
Ph.D. Coursework		/			
Paper I: Researce		ies in Enviro	nmental Studi	es	
Paper II: Review	of Literature				

Research Guidance

- 1. Supervision of Doctoral Thesis awarded: 05
- *2.* Supervision of Doctoral Thesis, under progress: **04**

Publications P	trofile		
	Peer Reviewed Journals		1
Year of Publication	Title	Journal/Book	<u>Co-Author</u>
2020	Fast-changing life-styles and ecotoxicity of hair dyes drive the emergence of hidden toxicants threatening environmental sustainability in Asia.	Environmental Research, 184, p.109253	V Mishra* , U Sharma, D Rawat, D Benson, M Singh, RS Sharma
2020	Peroxidases from an invasive Mesquite species for management and restoration of fertility of phenolic-contaminated soil	Journal of Environmental Management 256, 109908	S Singh, S Malhotra, P Mukherjee, R Mishra, F Farooqi, RS Sharma, V Mishra*
2020	Direct contact membrane distillation for effective concentration of perfluoroalkyl substances–Impact of surface fouling and material stability	Water Research, p.116010.	X Chen, A Vanangamudi, J Wang, J Jegatheesan, V Mishra, RS Sharma, SR Gray, J Kujawa, W Kujawski, F Wicaksana, LF Dumée
2020	<i>Prosopis juliflora</i> peroxidases for phenol remediation from industrial wastewater–An innovative practice for environmental sustainability.	Environmental Technology & Innovation, p.100865.	S Garg, P Kumar, S Singh, A Yadav, LF Dumée, RS Sharma, V Mishra*
2020	Dead biomass of <i>Morganella morganii</i> acts as an efficient adsorbent to remove Pb(II) from aqueous solution in different aeration– agitation and pH conditions	SN Applied Sciences. 2, 1258	P Kumar, A Maurya, S Garg, A Yadav,∙ V Mishra, RS Sharma
2019	Rhizosphere provides a new paradigm on the prevalence of lysogeny in the environment.	Soil and Tillage Research, 195, p.104368.	RS Sharma, S Nayak, S Malhotra, S Karmakar, M Sharma, S Raiping, V Mishra*
2019	Protein signatures linking history of miscarriages and metabolic syndrome: a proteomic study among North Indian women.	PeerJ, 7:e6321 https://doi.org/10.7717/p eerj.6321	S Sharma, S Yadav, K Chandiok, RS Sharma V Mishra*, KN Saraswathy
2019	Application of filamentous phages in environment: A tectonic shift in the science and practice of ecorestoration.	Ecology and Evolution. doi10.1002/ece3.4743.	RS Sharma, S Karmakar, P Kumar, V Mishra *
2018	Ecotoxic potential of a presumably non-toxic azo dye.	Ecotoxicology and Environmental Safety 148:528-537.	D Rawat, RS Sharma, S Karmakar, LS Arora, V Mishra*
2018	Viscum articulatum Burm. f. aqueous extract exerts antiproliferative effect and induces cell cycle arrest and apoptosis in leukemia cells.	Journal of Ethnopharmacology 219: 91-102	R Mishra, S Sharma, RS Sharma, S Singh, MM Sardesai, S Sharma, V Mishra*
2017	Environmental predictors of indole acetic acid producing rhizobacteria at fly ash dumps: Nature-based solution for	Frontiers in Environmental Science 5:59. doi:	S Malhotra, V Mishra *, S. Karmakar, RS Sharma

	sustainable restoration.	10.3389/fenvs.2017.000 59	
2017	Phenol remediation by peroxidase from an invasive mesquite: Turning an environmental wound into wisdom.	Journal of Hazardous Materials 334, 201-211	S. Singh, R Mishra, RS Sharma, V Mishra *
2017	Articulatin-D induces apoptosis via activation of caspase-8 in acute T-cell leukemia cell line.	Molecular and Cellular Biochemistry 426: 87– 99	R Mishra, MK Das, S Singh, RS Sharma, V Mishra *
2017	Purification and characterization of a lectin isoform of ribosome inactivating protein from <i>Viscumarticulatum</i> parasitic on <i>Grewiatilifolia</i> .	Phytomorphology 67(3&4), 67-84.	R. Mishra, A. Yadav, S. Sharma, S. Singh, R.S. Sharma, S. Malhotra, S. Karmakar, M.M. Sardesa V. Mishra*
2016	Detoxification of azo dyes in the context of environmental processes.	Chemosphere 155: 591 – 605.	D Rawat, V Mishra *, RS Sharma
2016	Polyclonal antibody development against purified CC-NBS-LRR like protein fragment from mature <i>Lageneriasiceraria</i> seeds and immunolocalization.	Protein Journal 35:379–390	N. Kumari, R. Kumar, V Mishra, S. Yadav
2016	Increased iron-stress resilience of maize through inoculation of siderophore- producing <i>Arthrobacterglobiformis</i> from mine.	Journal of Basic Microbiology 56:719- 735.	M Sharma, V Mishra , N Rau, RS Sharma
2016	Environmental Toxicants and Reproductive Health - an Environmental Perspective.	Indian Society for the Study of Reproduction and Fertility 18:78-81.	RS Sharma,S Karmakar, V Mishra
2014	Success of bioprospecting for treatment and prevention of reproductive cancers	Indian Society for the Study of Reproduction and Fertility (ISSRF), 14:23-25.	V Mishra
2012	Induction of apoptosis by ribosome inactivating proteins: importance of N-glycosidase activity.	Applied Biochemistry and Biotechnology 166:1552-1561.	M.K. Das, R.S. Sharma, V. Mishra*
2011	A cytotoxic type-2 ribosome inactivating protein (from leafless mistletoe) lacking sugar binding activity.	International Journal of Biological Macromolecules 49: 1096-1103	M.K. Das, R.S. Sharma, V. Mishra *
2011	A novel cationic peroxidase (VanPrx) from a hemi-parasitic plant (Viscumangulatum) of Western Ghats (India): Purification, characterization and kinetic properties.	Journal of Molecular Catalysis B: Enzymatic. 71: 63–70.	M.K. Das, R.S. Sharma, V Mishra*
2011	Functionally diverse rhizobacteria of Saccharummunja (a native wild grass) colonizing abandoned morrum mine in Aravalli hills (Delhi).	Plant and Soil 341:447–459.	M. Sharma, V. Mishra, N Rau,R.S. Sharma

2011	Variations in outer-membrane characteristics of two stem-nodulating bacteria of <i>Sesbania</i> <i>rostrate</i> and its role in tolerance towards diverse stress	Current Microbiology 63:81–86	R.S. Sharma, V. Mishra, A. Mohmmed, C.R. Babu
2009	Evaluation of functional diversity in rhizobacterial taxa of a wild grass (Saccharumravennae) colonizing abandoned fly ash dumps in Delhi urban ecosystem.	Soil Biology & Biochemistry, 41: 813– 821.	N. Rau, V. Mishra, M. Sharma, M.K. Das, K., Ahaluwalia, R.S. Sharma
2008	Antifungal activity of some Himalayan medicinal plants and cultivated ornamental species.	Fitoterapia 79: 589– 591.	R.S. Sharma, V. Mishra, R. Singh, N. Seth and C.R. Babu
2008	Purification and characterization of a unique peroxidase from a wild plant from Western Ghats region (India)	FEBS Journal 275 (S1): 397.	M.K. Das, R.S. Sharma, M. Sardesai, S.R. Yadav, V. Mishra
2008	Phage specificity and lipopolysachharides of stem- and root-nodulating bacteria (Azorhizobiumcaulinodans, Sinorhizobium spp., and Rhizobium spp.) of Sesbania spp.	Archives of Microbiology 189: 411- 418	R.S. Sharma, V. Mishra, A. Mohmmed, C.R. Babu
2005	Crystal structure of Himalayan mistletoe ribosome inactivating protein reveals the presence of a inhibitor and a new functionally active sugar-binding site.	Journal of Biological Chemistry 280: 20712 – 20721.	V. Mishra, S. Bilgrami, R.S. Sharma, P. Kaur, S. Yadav, R. Krauspenhaar, Ch. Betzel, W. Voelter, C.R. Babu, T.P. Singh
2005	cDNA Cloning and characterization of a ribosome inactivating protein of a hemi- parasitic plant (Viscum album L.) from North- Western Himalaya (India).	Plant Science 168 (3): 615-625.	V. Mishra, R.S. Sharma, M. Paramasivam, S. Bilgrami, S. Yadav, A. Srinivasan, C. Betzel, C.R. Babu, T.P. Singh
2005	Diversity in promiscuous group of rhizobia from three Sesbania spp. colonizing ecologically distinct habitats of the semi-arid Delhi region.	Research in Microbiology 156 (1): 57-67.	R.S. Sharma, A. Mohmmed, V. Mishra, C.R. Babu
2005	Unique sugar affinity of four novel isoforms of a ribosome inactivating protein from Viscum album (L.) inhabiting NW Himalaya.	FEBS Journal272 (s1): 75.	R.S. Sharma, V. Mishra, S. Yadav, C.R. Babu, T.P. Singh
2005	Structure–function relationship of a ribosome inactivating protein from a Himalayan hemiparasitic plant.	FEBS Journal 272 (s1): 54.	V. Mishra , R.S. Sharma, A.S. Ethayathulla, S. Bilgrami, M. Paramasivam, S. Yadav, C.R. Babu, T.P. Singh
2005	Natural colour yielding potential of Himalayan plant species and identification of probable class of compounds.	Asian Journal of Chemistry 17(1): 149- 154.	R.S. Sharma , V. Mishra, R. Singh, N. Seth, C.R. Babu
2004	Purification and characterization of four isoforms of Himalayan mistletoe ribosome inactivating protein from Viscum album having unique sugar affinity.	Archives of Biochemistry and Biophysics 423(2): 288- 301.	V. Mishra , R.S. Sharma,S. Yadav, C.R. Babu, T.P. Singh
2004	Crystal structure of a novel ribosome inactivating protein from a semi-parasitic plant inhabiting north-western Himalaya.	Acta Crystallography D60:2295-2304.	V. Mishra, A.S. Ethayathullah, R.S. Sharma, S. Yadav, R.

2002		Crystal structure of a ribosome inactivating viscumin from Indian Viscum album at 2.8 Å A58 (Suppl), 488. resolution. Krauspenhaar, C. Betze C.R. Babu, T.P. Singh A. Bhushan, V. Mishra, A.K. Verma, S. Yadav, R.S. Sharma, C.R. Babu, T.P. Singh		
Articles	<u>.</u>			
2016		Environmental Toxicants and Reproductive Health - an Environmental Perspective.Indian Society for the Study ofR.S. Sharma,S Karmakar, VReproduction and 		
2005		Sesbanias- a novel bioresource for restoration ecology and sustainable development. Species 43:29. R.S. Sharma, V. Mishra, A. Mohmmed, C.R. Babu		
2005		Unexplored ecological significance of Species 43:39. M. Sharma, N. Saccharummunja. Rau, V. Mishra, R.S. Sharma		
2004		Mistletoe- a potentially new medicinal resource. Species 41:10. V. Mishra, R.S. Sharma, C.R. Bat		
Confere	ence	e Presentations		
		nternational Conferences		
	1.	V Mishra (2019). Biological technologies for a sustainable dye industry. Indo-UK Workshop on Knowledge Transfer on the Sustainability of Innovative Wastewater Treatment Technologies to India: Circular Economy and Graphene-Related Technologies'06 March 2019, University of Delhi, India.		
	2.	S Sharma, AS Ethayathullah, V Mishra , BD Banerjee, RS Sharma (2019). Xanthatin, a sesquiterpene lactone, acts as a novel potent stabilizer for native form of transthyretin in breast cancer patients. International Health Congress 2019 on Human Health, 26–28 June 2019, t St. Hugh's College, University of Oxford, Oxford, United Kingdom		
	3.	S Garg, S Singh, P Kumar, Archana, RS Sharma, V Mishra (2019). Removal of chlorophenols using peroxidases of an invasive Mesquite from industrial effluents. International Conference on Chemistry and Environmental Sustainability, Feb 19-22, 2019, Mizoram University, Aizawl, India.		
	4.	V Mishra , R Mishra, RS Sharma (2019). Efficient induction of apoptosis by ribosome inactivating protein from Viscum articulatum in acute T-cell leukemia cell line. Integrative Chemistry, Biology and Translational Medicine (ICBTM-2019), Loyola University Chicago and University of Delhi, Delhi, India.		
	5.	P Kumar, A Maurya, Archana, S Garg, V Mishra, RS Sharma (2019). Removal of lead from aqueous solution by bacterial dead biomass based adsorbent. International Conference on Chemistry and Environmental Sustainability, Feb 19-22, 2019, Mizoram University, Aizawl, India.		
	6.	V Mishra (2018) Bioremediation Practices for Sustainable Dye Industry: An Environmental Perspective. India-UK Workshop on Knowledge transfer on the sustainability of innovative wastewater treatment technologies to India, 03-04 April 2018, Kongunadu Arts and Science College, Coimbatore, Tamil Nadu, India		
	7.	V Mishra (2018). Microbe-mediated Dye Detoxification: Current status, challenges, and research opportunities. International Workshop on Materials for Energy, Environment and Biological Applications, 5 April 2018, PG & Research Department of Biotechnology Kongunadu Arts and Science College.		
	8.	S Garg, RS Sharma, L Dumee, V Mishra (2017). Phage Display based biosensors for detection of environmental pollutants. International Conference on Nanobiotechnology, 05-06 February 2018, JamiaMilliaIslamia, New Delhi.		
	9.	R Mishra, A Yadav, RS Sharma, V Mishra (2017). Purification of a ribosome inactivating lectin from <i>Viscumarticulatum</i> : a protein with multiple enzymatic activities. World biotechnology congress, 2017.		

- R Mishra, RS Sharma, V Mishra (2016), Evaluation of anticancerous potential of aqueous extract of Viscumarticulatum, leafless mistletoe, on human leukemia cells. 5th Biennnial International conference on new developments in drug discovery from natural products and traditional medicine, NIPER, Mohali, Punjab.
- 11. S Karmakar, V Mishra, RS Sharma (2016).Pattern of distribution of bacterial host and its phages in soil environment. Expert Opin Environ Biol, 5:3(Suppl).http://dx.doi.org/10.4172/2325-9655.C1.011
- 12. S Karmakar, V Mishra, RS Sharma (2016). Environmental applications of ssDNA bacterial viruses. VirusDis. 27(4):428
- 13. V Mishra, S Malhotra, AJuneja, S Karmakar, RS Sharma (2015). Variation in nitrogen-fixing bacteria in different plant species atdifferent stages of vegetation development. In: Proceedings of 56th Annual Conference of Association of Microbiologists of India (AMI-2015) & International Symposium on "Emerging Discoveries in Microbiology" Dec 7-10, 2015, JNU, New Delhi, pp. AMP97
- RS Sharma, S Karmakar, R Bidhuri, S Malhotra, R Singh, V Mishra (2015). Prevalence of polyphosphate accumulating bacteria in degraded ecosystems. In: Proceedings of 56th Annual Conference of Association of Microbiologists of India (AMI-2015) & International Symposium on "Emerging Discoveries in Microbiology" Dec 7-10, 2015, JNU, New Delhi, pp. EMP123
- **15. V. Mishra,** M.K. Das, R.S. Sharma(2015).Indian Mistletoe: Source ofNovel Anti-cancerRibosome InactivatingProtein. International Symposium on"Current Advances inRadiobiology, Stem Cells andCancerResearch" at Jawaharlal NehruUniversity, New Delhi, IndiaFebruary, 2015
- S. Sharma, V. Mishra, A.S.Ethayathullah, S. Karmakar, R.S. Sharma (2015). Identification of multi-targeted Plant Compound for Breast Cancer Therapeutics. International Symposium on "Current Advances in Radiobiology, Stem Cells and Cancer Research" at Jawaharlal Nehru University, New Delhi, India February,
- R.S. Sharma, S. Raiping, M.K. Das, V. Mishra, N. Rau, M. Sharma (2006). Phage induced functional diversity in rhizosphere bacteria and its significance in restoration ecology. International Symposium on Biology, Ecology and Management of World's Worst Plant Invasive Species. 10-14 December 2006.
- M.K. Das, R.S. Sharma, V. Mishra. Prospecting of stem-parasitic weeds for novel medicinally important compounds. In: International Symposium on Biology, Ecology and Management of World's Worst Plant Invasive Species. December 10-14 2006.
- R.S. Sharma, A. Mohmmed, V. Mishra, C.R. Babu. Diversity in functionally important traits of promiscuous group of *Sesbania*-rhizobia and their colonization potential to ecologically diverse habitats of a semi-arid region of India. XVII International Botanical Congress 2005, July 17-23, 2005.
- V. Mishra, R.S. Sharma, T.P. Singh, C.R. Babu. Novel ribosome inactivating proteins (RIPs) from Himalayan *Viscum album* (L.)- potential biomolecules for bioprospecting. XVII International Botanical Congress 2005, July 17-23, 2005.
- M.K. Das, S. Raiping, V. Mishra, M. Sharma and R.S. Sharma. Significance of bacteriophage sensitivity in rhizosphere ecology of growth promoting bacteria of *Dichanthiumannulatum*(Willem.). In: Third International Conference on Plants and Environmental Pollution (ICPEP-3), 28 November 2 December 2005.
- S. Raiping, R.S. Sharma, M. Sharma, V. Mishra. Soil-borne bacteriophages of rhizobacteria of *Dichanthiumannulatum*(Willem.) inhabiting mined out area and their significance in inoculation technologies. In: Third International Conference on Plants and Environmental Pollution (ICPEP-3), 28 November – 2 December 2005.
- N. Rau, R.S. Sharma, V. Mishra. Variations in functional properties among rhizosphere bacteria of Saccharummunja(L.) inhabiting heavy metal contaminated fly ash dumps. In: Third International Conference on Plants and Environmental Pollution (ICPEP-3), 28 November – 2 December 2005.
- 24. V. Mishra, R.S. Sharma, T.P. Singh, C.R. Babu. Diversity In Ribosome inactivating proteins from a Himalayan parasitic plant: *Viscum album* L. In:ICOB-4 & ISNP-24, IUPAC International Conference on Biodiversity and Natural Products: Chemistry and Medical Applications, 26-31 January 2004.

- 25. R. Singh, R.S. Sharma, V. Mishra, N. Seth, C.R. Babu. Chemical prospecting for medicinal compounds from a hemi-parasitic plant (*Dendrophthoetrigona*) inhabiting western ghats of India. In:ICOB-4 & ISNP-24, IUPAC International Conference on Biodiversity and Natural Products: Chemistry and Medical Applications, 26-31 January 2004.
- V. Mishra, R.S. Shamra, S. Bilgrami, S. Yadav and T.P. Singh. Diversity in ribosome inactivating proteins (Rips): some molecular evidences. In: International Symposium on Ecology of Biological Invasions, December 4-6, 2003.
- 27. V. Mishra, S. Bilgrami, M. Paramsivam, S. Yadav, R.S.Sharma, C.R., Babu, T.P. Singh (2003). Crystal structure of a ribosome inactivating protein (Viscumin) from the Indian *Viscum album* reveals the presence of natural superinhibitor. "International Symposium on Modern Trends in Cellular and Molecular Biology" on March 6-7, 2003
- 28. V. Mishra, S. Bilgrami, M. Paramasivam, A.K. Varma., S. Yadav, R.S.Sharma,C.R. Babu, T.P. Singh. Crystal structure of a ribosome inactivating protein (viscumin) from Indian *Viscum album* at 2.8 Å resolution in The First Indian Symposium of the Protein Society – Protein Structure and Function, by International Protein Society at Indian Institute of Technology Bombay, Mumbai, October 18 - 20, 2002.
- 29. V. Mishra, A.K. Varma, S. Yadav, R.S.Sharma, C.R. Babu, T.P. Singh. Crystal structure of a Ribosome inactivating viscumin from Indian *Viscum album* at 2.8 Å resolution in AsCA 01 IVth Meeting of Asian Crystallographic Association at Indian Institute of Science Bangalore, India, November 18-21, 2001.

B.National Conferences

- **30. V. Mishra** (2019). Bioprospecting: A biological path for innovation and health security. UGC Faculty Development Programme, 03 May 2019, Bharti College, University of Delhi, Delhi.
- 31. V. Mishra (2019). Environmental health: Current status and path ahead. Inaugural Society of Chemists, 07 April 2019, Ramjas College, University of Delhi, Delhi.
- **32. V. Mishra** (2018). Microbe-dye-environment interactions: A key to confront hidden threats of industrial effluent to environmental security. Faculty Development Programme on Environment Sustainability and Higher Education, 04 June–11 June 2018, Dyal Singh College, New Delhi.
- **33.** S Sharma, S Yadav, K Chandok, KN Saraswathy, **V Mishra** (2017). Understanding the link between adverse pregnancy outcomes and metabolic syndrome through proteomics. 27th Annual Meeting of the Indian Society for the Study of Reproduction and Fertility (ISSRF), All India Institute of Medical Sciences, New Delhi, India.
- 34. S Sharma, V Mishra, AS Ethayathullah, P Yadav, BD Banerjee, RS Sharma (2017). Transthyretin a novel therapeutic target for breast cancer. National Conference on Breaking Barriers through Bioinformatics & Computational Biology, 31 July–01 August 2017, .Indian Institute of Technology Delhi, New Delhi, India.
- **35. V. Mishra** (2016). Workshop on Biostatistics for College Teachers, February 2016, Miranda House College, University of Delhi, Delhi.
- 36. D Rawat, S Sharma, RS Sharma, V Mishra (2015). Proteomic analysis of halophilic bacterium efficient in degrading Acid Orange 7 Dye. 7th Annual Meeting of Proteomics Society of India (PSI) "Biochromatography, Molecular Recognition and Proteomics" Vellore Institute of Technology (VIT), Vellore, Tamil Nadu, Dec 3–6, 2015
- 37. D Rawat, RS Sharma, V Mishra (2015). Toxicity assessment of microbe-mediated degradation of Acid Orange 7 dye. In: 1st International Conference on Trends in Cell and Molecular Biology (TCMB), Birla Institute of Technology and Science (BITS) Pilani, Goa, Dec 19–21, 2015
- S. Karmakar, V. Mishra, R.S. Sharma(2013). Role of environmental management of heavy metals to improve reproductive health of human. National Symposium on Changing Environment and Lifestyle: Impact on Reproductive Health (NSCEL- 2013), AIIMS, New Delhi. 19–20 November 2013

- V Mishra (2014). Success of bioprospecting for treatment and prevention of reproductive cancers National Symposium on Changing Environment and Lifestyle: Impact on Reproductive Health (NSCEL-2013), AIIMS, New Delhi 19– 20 November 2013
- 40. S. Singh. V. Mishra (2013). Prospecting of ribosome inactivating proteins for the development of traditional abortifacient into clinically useful product.National Symposium on Changing Environment and Lifestyle: Impact on Reproductive Health (NSCEL-2013), AIIMS, New Delhi. 19– 20 November 2013
- S. Karmakar, V. Mishra, R.S. Sharma (2013). Roleof environmentalmanagement of heavymetals to improvereproductive health ofhuman.National Symposium onChanging Environmentand Lifestyle: Impact onReproductive Health(NSCEL-2013), AIIMS,New Delhi. 19– 20November 2013
- 42. V. Mishra, A.S Ethayathulla, S. Bilgrami, R.S. Sharma, S. Yadav, P. Kaur, C.R. Babu T.P. Singh. Crystal structure determination and structure-function relationship of a type II ribosome inactivating protein from a Himalayan hemi-parasitic plant. 34th National Seminar on Crystallography, Indian Crstallographic Association and INSA National Committee for IUPAB &IUCr, January 10-12 2005.
- R.S. Sharma, A. Mohmmed, V. Mishra, C.R. Babu. Strainal differentiation in the promiscuous group of rhizobia from three Sesbania spp. colonizing ecologically distinct habitats of semi-arid Delhi region. In: BioTech 2004: Challenges & Opportunities, 2nd National Conference Biotechnology Society of India, New Delhi. October 13-15, 2004.
- M. Sharma, V. Mishra, C.R. Babu, R.S. Sharma. Lithophytic grasses and associated microbes: ideal inputs for biological technologies for ecological restoration of degraded lands. In: BioTech 2004: Challenges & Opportunities, 2nd National Conference Biotechnology Society of India, New Delhi. October 13-15, 2004.
- 45. V. Mishra, S. Yadav, R.S. Sharma, C.R. Babu, T.P. Singh. Crystal structure of a ribosome inactivating viscumin from Indian *Viscum album* in. XXXI National Seminar on Crystallography, BARC, Mumbai, June 19-22, 2001.

Research Projects (Major Grants/Research Collaboration)

Principal Investigator, DST, Technology Mission Division (Energy, Water & Others) sponsored R & D project " "Development of a novel single-stage environmental safety" under Optimal Water Use in Industrial Sector" 2019-2021

<u>Principal Investigator</u>, UGC-DU sponsored R & D project"Prevalence and ecological significance of polyphosphate in abandoned mine" 2015-2016

<u>Principal Investigator</u>, DST-Gol sponsored R & D project: Functional and Taxonomic Diversity Among Plant Growth Promoting Rhizobacteria....... Fly Ash Environment" 2013-2016

<u>Principal Investigator</u>, UGC-DU sponsored R & D project "Prevalence Diversity and distribution of...... as determinant factors" 2014-2015

<u>Co-Principal Investigator</u>, DU-DST sponsored R & D project "Diversity in bacteria of bacteriophages" 2014–2018

<u>Mentor</u>DU sponsored Innovation project "Exploring the use of biocatalysis in laboratory chemical reactions: A green chemistry approach" 2014-2015

<u>Principal Investigator</u>, NBDB, DBT sponsored R & D project "Evaluation of Viscaceae Members of Western Ghats Region for Prospecting of Ribosome Inactivating Proteins", 2006-2010.

Awards and Distinctions

- * Global Partnership Scheme Visiting Fellow, University of Exeter, 2019
- * SERB Women Excellence Award 2014
- * DBT CREST Award 2011-2012
- * DST BOYSCAST Award 2010
- * INSA Young Scientist Medal in Plant Sciences (2006)
- * N.S. Rangaswamy Medal for the Best Ph.D. Thesis, University of Delhi

Signature of Faculty Member