

Dr. Santosh Kumar Prajapati  
M.Sc.; Ph.D. (BHU)



Professor (Direct)  
Department of Botany  
School of Studies of Life Science  
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### **Research Interests:**

Monitoring of environmental pollutants; Metals/metalloids genotoxicity assessments; leaf chlorophyll fluorescence measurements; Fly ash reclamation; artificial light pollution

### **Expertise:**

Atomic absorption spectroscopy; Mini-PAM; Trad-MCN bioassay; Flame photometer

### **Research grants mobilized:**

SN	Title	Funding agencies	Amount (in lacs)
1	Studies of organisms in the benthic zone of Hasdeo River and impact of proposed ash dyke on Riparian Vegetation and community in the river basin (Tender Ref No : NTPC/Korba STPS/9900245529)	NTPC, Korba	10.00
2	Effects of heavy metals/metalloids contamination of sewage on micronucleus in <i>Allium cepa</i> and on microbial enzyme activities	DBT	26.90
3	Effects of heavy metals/metalloids contamination of soils on micronucleus induction in <i>Tradescantia</i> and on microbial enzyme activities	UGC	8.08
4	Heavy Metal Speciation of Dust Deposited on Plant Leaves and its Effect on Biochemical Parameters of Leaf (Chlorophyll, Ascorbic acid, Leaf extract pH and Relative Water Content)	UGC start-up-grant	6.00

### **PhD Supervised- one (01)**

Dr Neelima Meravi on Topic "Ecological Impacts of Heavy Metals in the Vicinity of NTPC, Sipat"

### **Ongoing- two (02)**

### **PG Dissertation supervised- 24**

***h-index*** – 15; ***i-10 index***-16; ***RG score*** -19.69; ***total citations***- 1109

### **Honors/Awards**

- ❖ Awarded DBT RGYI, 2012.
- ❖ Awarded Dr. D.S. Kothari Postdoctoral Fellowship by UGC, (May, 2009)
- ❖ Awarded Extended SRF in Earth Sciences (2008) by CSIR, New Delhi.
- ❖ *Selected as Post Doctoral fellow in* Université de Corse, UMR CNRS 6134, Sciences Pour l'Environnement, B.P. 52, 20 250 Corte (France) under Prof. *Vanina Pasqualini for the year 2009 (tenure 1 year)*
- ❖ *Selected for Postdoctoral scholarship by Ministry of National Education and Religious Affairs, General Directorate of European & International Affairs, Directorate of International Relations in Education, Section A', Scholarship Department, Andrea*

*Papandreou 37, 15180 Marousi, Greece for the academic year 2008-2009. Decision No. 109572/I/26.08.08*

❖ Awarded CSIR-JRF in Life Sciences (2004).

#### **Member Administrative/Academic Bodies:**

- ✚ School Board for the School of Studies of Life Sciences (Guru Ghasidas Vishwavidyalaya) vide Ref. No. 57/Academic/2023 dated 28-04-2023.
- ✚ Court of the University (Guru Ghasidas Vishwavidyalaya) vide O.M. no. 293/Court/Meeting Cell/2022 dated 11-05-2022
- ✚ Executive Council of Guru Ghasidas Vishwavidyalaya vide O.M. no. 291/meeting cell/EC/2022 dated 05-05-2022
- ✚ Standing Committee of Academic Council, Guru Ghasidas Vishwavidyalaya vide Notification no. 198/Meeting Cell/ 2021 dated 11-12-2021 (2021-2024)
- ✚ Academic Council Guru Ghasidas Vishwavidyalaya vide Notification No. 175/Meeting Cell/2021 dated 28-10-2021 (2021-2024)
- ✚ Board of Studies in Botany, Guru Ghasidas Vishwavidyalaya (2011-2017)
- ✚ Board of Studies in Botany, Sarguja University, Ambikapur, C.G. (2019)

#### **Administrative/academic responsibilities:**

- ✚ Director- International Guest House & Jawahar Sadan Guest House, GGV vide notification no. 1787/Estt/Admn/2023 dated 24-04-2023
- ✚ Coordination committee member for monitoring the "Repair & Maintenance/ Extension Work" to be carried out by M/s MECON Ltd. at various places in the campus vide No./Engg/MECON-R&M/EW/GGV/2023 dated 21-03-2023
- ✚ Member- Internal Quality Assurance Cell (IQAC), GGV vide SN. 1399/Estt/Admn/2023 dated 14-03-2023
- ✚ Committee member for preparation of draft proposal for Promotion of University Research and Scientific Excellence – 2022 vide OM No. 216 Dated 07-07-2022
- ✚ Committee member for preparation of draft proposal and overall Supervision and Monitoring of FIST Programmes in GGV vide OM No. 212 Dated 15.6.2022
- ✚ In-Charge University Cafeteria- vide Notification no. 3623/Estt/Admn/2021 dated 13-11-2021
- ✚ In-Charge Officer University Guest House- (Jawahar Sadan Guest House & International Guest House) vide Notification no. 2812/Estt/Admn/2021 dated 14-09-2021

#### **Education**

Sl.No.	Institution /Boards	Degree	Year	Division	Field of Study
1	BHU	Ph.D.	2008		Air Pollution & its impact on plants
2	BHU	M.Sc	2004	1 <sup>st</sup>	Botany (Stress & Terrestrial)
3	Purvanchal	B.Sc.	2001	1 <sup>st</sup>	Botany and Chemistry
4	CBSE	12 <sup>th</sup>	1998	1 <sup>st</sup>	Science
5	CBSE	10 <sup>th</sup>	1996	1 <sup>st</sup>	Science

***Position and Employment (Starting with the most recent employment)***

<b>Sl No.</b>	<b>Institution</b>	<b>Position</b>	<b>From (Date)</b>	<b>To (date)</b>
1	Guru Ghasidas Vishwavidyalaya	Professor	20/02/23	Cont...
2	Guru Ghasidas Vishwavidyalaya	Assistant Professor	10/08/09	20/02/23

## List of Publications

1. Mehta A, Kumar Ratre Y, Sharma K, Soni VK, Tiwari AK, Singh RP, Dwivedi MK, Chandra V, Prajapati SK, Shukla D and Vishvakarma NK (2021) Interplay of Nutrition and Psychoneuroendocrine-immune Modulation: Relevance for COVID-19 in BRICS Nations. *Front. Microbiol.* 12:769884. doi: 10.3389/fmicb.2021.769884
2. Singh, P K., **Prajapati, S.K.**, Kumari, S., Chaturvedi, R.K. 2022. Disturbance induced changes in diversity of medicinal plants in a dry tropical forest of India. *Frontiers in Forests and Global Change*, 4:718930. doi: 10.3389/ffgc.2021.718930.
3. Meravi, N., Singh, P.K., **Prajapati, S.K.** 2021. Seasonal variation of dust deposition on plant leaves and its impact on various photochemical yields of plants. *Environmental Challenges*, 4, 100166.
4. Meravi, N., **Prajapati, S.K.**, 2020. Seasonal variation in chlorophyll a fluorescence of *Butea monosperma*. *Biological Rhythm Research*, 51:6, 879-886.
5. Meravi, N., **Prajapati, S.K.**, 2020. Temporal variation in chlorophyll fluorescence of different tree species. *Biological Rhythm Research*, 51:3, 331-337.
6. Meravi, N., **Prajapati, S.K.**, 2020. Effect street light pollution on the photosynthetic efficiency of different plants. *Biological Rhythm Research*, 51:1, 67-75.
7. Meravi, N., **Prajapati, S.K.** 2019. Reclamation of fly ash dykes using naturally growing plant species. *Proceedings of the International Academy of Ecology and Environmental Sciences*, 9:4, 137-148.
8. **Prajapati, S.K.**, Sharma, K., Singh, P.K. 2018. Plant diversity in tropical dry deciduous forests of Jashpur, Chhattisgarh with special reference to their ethnomedicinal uses. *Tropical Ecology*, 59:3, 505–514.
9. Meravi, N., **Prajapati, S.K.**, 2018. Genotoxicity assessment of soil contaminated by metals/metalloids using *Tradescantia pallida*. *East African Scholars Journal of Agriculture and Life Sciences*, 1:1, 17-21.
10. **Prajapati, S.K.**, Meravi, N., 2015. Effect of fly ash on the photosynthetic parameters of *Zizyphus mauritiana*. *Advances in Forestry Letters*, 4: 1-5
11. Meravi, N., **Prajapati, S.K.**, 2014. Effects of heavy metals/metalloids present in fly ash from coal fired thermal power plant on photosynthetic parameters of *Mangifera indica*. *Environmental Skeptics and Critics*, 3:4, 88-92.
12. **Prajapati, S.K.**, Meravi, N., 2014. Heavy metal speciation of soil and *Calotropis procera* from thermal power plant area. *Proceedings of the International Academy of Ecology and Environmental Sciences*, 4:2, 68-71.

13. Meravi, N., **Prajapati, S.K.**, 2013. Effects of heavy metals/metalloids contamination of soils on micronucleus induction in *Tradescantia pallida*. *Environmental Skeptics and Critics*, 2:2, 58-62
14. **Prajapati, S.K.**, 2012. Biomonitoring and speciation of road dust for heavy metals using *Calotropis procera* and *Delbergia sissoo*. *Environmental Skeptics and Critics*, 1:4, 61-64.
15. **Prajapati, S.K.**, 2012. Ecological effect of airborne particulate matter on plants. *Environmental Skeptics and Critics*, 1:1, 12-22.
16. Meravi, N., Singh, S., **Prajapati, S.K.**, 2012. Phytoremediation of chromium and cobalt Using *Pistia stratiotes*: a sustainable approach. *Proceedings of the International Academy of Ecology and Environmental Sciences*, 2:2, 136-138.
17. **Prajapati, S.K.**, Tripathi, B.D. 2009. Distribution of vehicular pollutants in street canyons of Varanasi, India: a different case. *Environmental Monitoring and Assessment*. 148:1-4, 167-172.
18. **Prajapati, S.K.**, Tripathi, B.D. 2008. Assessing the Genotoxicity of Urban Air Pollutants in Varanasi City Using *Tradescantia* Micronucleus (Trad-MCN) Bioassay. *Environment International*. 34:8, 1091-1096.
19. **Prajapati, S.K.**, Tripathi, B.D. 2008. Seasonal Variation of Leaf Dust Accumulation and Pigment Content in Plant Species Exposed to Urban Particulates Pollution. *Journal of Environmental Quality*. 37, 865-870.
20. **Prajapati, S.K.**; Tripathi, B.D., 2008. Anticipated Performance Index of Some Tree Species Considered for Green Belt Development in and around an Urban Area: a Case Study of Varanasi City, India. *Journal of Environmental Management*. 88:4, 1343-1349.
21. **Prajapati, S.K.**; Tripathi, B.D. 2008. Biomonitoring Seasonal Variation of Urban Air Polycyclic Aromatic Hydrocarbons (PAHs) Using *Ficus benghalensis* Leaves. *Environmental Pollution*. 151, 543-548.
22. **Prajapati, S.K.**; Tripathi, B.D.; 2007. Biomonitoring Trace-element Levels in PM10 Released from Vehicles Using Leaves of *Saraca indica* and *Lantana camara*. *AMBIO: A Journal of Human Environment*. 36:8, 704-705.
23. Pandey, S. K., Tripathi, B.D., Mishra, V.K., **Prajapati, S. K.**, 2006. Size fractionated speciation of nitrate and sulfate aerosols in a sub-tropical industrial environment. *Chemosphere*. 63, 49-57.

#### Conference proceedings:

1. **Prajapati, S.K.**, Meravi, N., 2015. Comparative Study on Effects of Heavy Metals/Metalloids Present in Fly Ash from Coal Fired Thermal Power Plant on Photosynthetic Parameters of *Ficus bengalensis* and *Plumeria rubra*. Pp.118-123. In: S N Tripathi (eds.) Proceedings of National Conference on Climate Change: Impacts,

Adaptation, Mitigation Scenario and Future Challenges in Indian Perspective, ISBN: 978-93-5235-335-4.

2. Meravi, N., **Prajapati, S.K.**, 2015. Heavy Metal Speciation of Fly Ash Leachate and its Genotoxicity Assessment Using Trad-MCN Bioassay". Pp. 147- 148. In: S N Tripathi (eds.) Proceedings of National Conference on Climate Change: Impacts, Adaptation, Mitigation Scenario and Future Challenges in Indian Perspective, ISBN: 978-93-5235-335-4.

### Books

- ❖ **Prajapati, S. K.**, Vehicular Pollution: Biomonitoring and its Impact on Plants, Lap-Lambert Academic Publishing, Germany, ISSN: ISBN 978-3843372060

### Book Chapter

- ❖ Meravi, N., **Prajapati, S.K.**, 2015. Biomonitoring the Genotoxicity of Heavy Metals/Metalloids Present in Soil Contaminated by Fly Ash from Coal-Fired Thermal Power Plant Using *Tradescantia pallida*. pp 169-176. In: Ansari, A.A., Gill, S.S., Newman, L., Lanza, G.R. (eds) *Phytoremediation: Management of Environmental Contaminants Vol 1 Springer Publications, New York* (ISBN 978-3-319-10394-5).

### Articles

- ❖ E-letter Science (Native and Non-Native Species for Biofuels. *Science(2006;313:1742)*

### Invited Lecture

Title of Lecture	Title of RC/FIP/Conference/ Seminar etc.	Organized by
Faculty Induction Programme (13 <sup>th</sup> March 2023)	<i>Global Climate Change</i>	HRDC, RDV, Jabalpur, MP
Analysis of Floral Diversity	<i>Characterization of Biodiversity of Tropical Forest Ecosystems of Achanakmar-Amarkantak, Biosphere Reserve of Chhattisgarh, India</i>	Academic Staff College, GGV, Bilaspur.

### Workshops

- ❖ Completed two weeks special training course on ‘Atmospheric Remote Sensing for Weather and Climate’ during January 2-12, 2018 at IIRS Dehradun.
- ❖ Completed training programme on 'Forest Genetic Resource Assessment, Conservation & Management', at IFB Hyderabad, from 1-3 November 2017