

CURRICULUM VITAE

Dr. Vijay Pratap Singh

D. Phil.

(Assistant Professor of Botany)

Department of Botany,
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Academic Qualifications:

- ❖ **D.Phil. (Botany)** in Science, University of Allahabad, Prayagraj (2012)
- ❖ **M.Sc. (Botany, First)** University of Allahabad, Prayagraj, 2005
- ❖ **B.Sc. (Biology, First)**, M.J.P. Rohilkhand University, Bareilly, 2002
- ❖ **CSIR-NET-JRF**, Life Sciences, 2005

Teaching Experience: UG & PG more than ten years

1. 09.03.2018 to till date: Assistant Professor, Department of Botany, C.M.P. Degree College, University of Allahabad, Prayagraj, Uttar Pradesh
2. 06.12.2012 to 08.03.2018: Assistant Professor, Department of Botany, Govt. Ramanuj Pratap Singhdev Post Graduate College, Baikunthpur, Koriya, Chhattisgarh

Major paper taught in UG and PG:

1. Advanced Plant Physiology, Biochemistry, Molecular Biology

Research Interests: Heavy metal tolerance in crop plants, Nitric oxide, Reactive oxygen species, Hydrogen sulfide, Silicon, Signaling, Phytohormones, Nanoparticles

Honor/Recognition:

1. 2022 Highly Cited Researcher, Clarivate Analytics, In top 1% of Global Scientific Community
2. 2021 Highly Cited Researcher, Clarivate Analytics, In top 1% of Global Scientific Community
3. 2nd Rank (in Natural Sciences) in University of Allahabad, World Scientist and University Rankings 2023, AD Scientific Index 2023
4. 5th Rank in University of Allahabad, World Scientist and University Rankings 2022, AD Scientific Index 2022
5. Top 2% Highly Cited Researcher in 2021, Stanford University
6. Top 2% Highly Cited Researcher in 2020, Stanford University
7. Top 2% Highly Cited Researcher in 2019, Stanford University

Total Citations: 11991; h-index: 50; i10-index: 131

Research/Editorial/Opinion/Review Articles: 152

- Original Research Articles: **96**
- Review Articles: **44**
- Opinion articles: **02**
- Editorials: **10**

Best Ten Papers:

1. Singh, P., Jaiswal, S., Kushwaha, A., Gahlowt, P., Mishra, V., Tripathi, D.K., Singh, S.P., Gupta, R., **Singh, V.P.**, 2023. Peroxynitrite is essential for aerenchyma formation in rice roots under waterlogging conditions. *Planta* 258(1), 2 (**Corresponding author, Springer, IF 4.540**).
2. Tripathi, D.K., Rai, P., Kandhol, N., Kumar, A., Sahi, S., Corpas, F.J., Sharma, S., **Singh, V.P.**, 2022. Silicon palliates chromium toxicity through the formation of root hairs in rice (*Oryza sativa*) mediated by GSH and IAA. *Plant and Cell Physiology* 63, 1943–1953 (**Corresponding author, Oxford University Press, IF 5.783**).
3. Tripathi, D.K., Kandhol, N., Rai, P., Mishra, V., Pandey, S., Deshmukh, R., Sahi, S., Sharma, S., **Singh, V.P.**, 2022. Ethylene renders silver nanoparticles stress tolerance in rice seedlings by regulating endogenous nitric oxide accumulation. *Plant and Cell Physiology* 63, 1954–1967 (**Corresponding author, Oxford University Press, IF 5.783**).
4. Singh, P., Mishra, V., Tripathi, D.K., Corpas, F.J., **Singh, V.P.**, 2022. RIPK: a crucial ROS signaling component in plants. *Trends in Plant Science* 27, 214-216 (**Corresponding author, Cell Press, IF, 22.012**).
5. Mishra, V., Singh, P., Tripathi, D.K., Corpas, F.J., **Singh, V.P.**, 2021. Nitric oxide and hydrogen sulfide: an indispensable combination for plant functioning. *Trends in Plant Science* 26, 1270-1285 (**Corresponding author, Cell Press, IF, 22.012**).
6. Tripathi, D.K., Rai, P., Guerriero, G., Sharma, S., Corpas, F.J., **Singh, V.P.**, 2021. Silicon induces adventitious root formation in rice (*Oryza sativa* L.) under arsenate stress with the involvement of nitric oxide and indole-3-acetic acid. *Journal of Experimental Botany* 72, 4457-4471 (**Corresponding author, Oxford University Press, IF 7.298**).
7. Kushwaha, B.K., **Singh, V.P.**, 2020. Glutathione and hydrogen sulfide are required for sulfur-mediated mitigation of Cr (VI) toxicity in tomato, pea and brinjal seedlings. *Physiologia Plantarum* 168, 406-421 (**Corresponding author, Wiley, IF 5.081**).
8. Kushwaha, B.K., Singh, S., Tripathi, D.K., Sharma, S., Prasad, S.M., Chauhan, D.K., Kumar, V., **Singh, V.P.**, 2019. New adventitious root formation and primary root biomass accumulation are regulated by nitric oxide and reactive oxygen species in rice seedlings under arsenate stress. *Journal of Hazardous Materials* 361, 134-140 (**Corresponding author, Elsevier, IF 14.224**).
9. **Singh, V.P.**, Singh, S., Kumar, J., Prasad, S.M., 2015. Hydrogen sulfide alleviates toxic effects of arsenate in pea seedlings through up-regulation of the ascorbate-glutathione cycle: Possible involvement of nitric oxide. *Journal of Plant Physiology* 181, 20-29 (**Corresponding author, Elsevier, IF 3.686**).
10. **Singh, V.P.**, Srivastava, P.K., Prasad, S.M., 2013. Nitric oxide alleviates arsenic-induced toxic effects in ridged *Luffa* seedlings. *Plant Physiology and Biochemistry* 71, 155-163 (**Elsevier; IF 5.437**).

PhD Awarded: 01

PhD Students working: 4 (as a sole supervisor) + 02 (as a co-supervisor)

M.Sc. Thesis Supervision: 16

Research Project ongoing: 01 (Funded by SERB, New Delhi (Rs. 36, 54, 464)

Research Projects completed: 02 (Funded by DBT (Rs. 35, 36, 229) and UGC (Rs. 4, 80, 000)

Research Projects submitted: 03 (SERB (Rs. 49, 63, 984), CSIR (Rs. 46, 12, 720), and BRNS, DAE (Rs. 32, 45, 000)

Reviewer for Research Proposals: National Science Foundation: NSF, USA; National Science Center, Poland

Books Edited: 13 (with Academic Press Elsevier, Wiley, CRC Press, Springer Nature, etc.)

Book Chapters: 10

Book Series: 04 (with Elsevier, Springer, etc.)

Serving as a Regular Editor:

Associate editor- Acta Physiologiae Plantarum, Springer Nature (Impact factor 2.6)

Associate editor- Plant Growth Regulation, Springer Nature (Impact factor 4.2)

Review editor- Journal of Plant Growth Regulation, Springer Nature (Impact factor 4.8)

Editor- Biologia Plantarum, Institute of Experimental Botany, Czech Academy of Sciences (Impact factor 1.5)

Editor- Biocatalysis and Agricultural Biotechnology, Elsevier (Impact factor 4.0)

Editor- Reactive Oxygen Species, USA

Worked as a Guest Editor in Journals: Journal of Experimental Botany (Oxford University Press), Frontiers in Plant Science (Switzerland), Environmental and Experimental Botany (Elsevier), Physiologia Plantarum (Wiley), Journal of Hazardous Materials (Elsevier), Biologia Plantarum (Institute of Experimental Botany, Czech Academy of Sciences), Plant Cell Reports (Springer Nature), Plant Biology (Wiley), Plant Physiology and Biochemistry (Elsevier), Environmental Pollution (Elsevier) etc.

Invited Lectures:

- ❖ As a Resource Person, Indian Science Congress Association, Kanpur Chapter (2022)
- ❖ As a Resource Person, Chhatrapati Shahu Ji Maharaj University, Kanpur in PhD Course work (2022)
- ❖ As a Resource Person, Amity University, Noida for UG and PG students of Agriculture (2020, 2021, 2022)
- ❖ Invited lecture as a resource person for M.Sc. Botany students at Govt. Lahiri PG Collge, Chirimiri, Chhattisgarh, 2016
- ❖ As a Resource Person, In a national seminar as an invited lecture held at Govt. Vivekanad P.G. college, Manendragarh during October, 2015
- ❖ Invited lecture as a resource person for B.Sc. students at Govt. Vivekanad P.G. college, Manendragarh during December, 2015
- ❖ Invited lectures on RUSA in various colleges of Koriya district, Chhattisgarh
- ❖ Invited lectures on AISHE in various colleges of Koriya district, Chhattisgarh

Member of Professional Bodies:

1. Life member, The US Sorghum Community
2. Life member, International Society for Root Research
3. Life member, International Society of Silicon in Agriculture
4. Life member, Indian Science Congress
5. Life member, Prof. H.S. Srivastava Foundation for Science and Society
6. Life member, The Biotech Research Society, India
7. Life member, Institute of Applied Sciences, Allahabad
8. Life member, Advances in Life Sciences
9. Life member, Trends in Biosciences

Regular Reviewer for the Journals From: Oxford University Press (Plant Physiology, Journal of Experimental Botany, Plant and Cell Physiology, etc.), Elsevier, Wiley, Springer, Taylor and Francis, ACS, RSC, Frontiers, MDPI, etc.

Administrative responsibilities:

- Subject expert, Central Board of Studies, Chhattisgarh Higher Education Department (2021-2023)
- Member Project/PhD/Publication Committee, C.M.P. Degree College, University of Allahabad, Prayagraj (2018-2020, 2022-till date)
- District Nodal Officer, Rashtriya Uchchar Shiksha Abhiyan (RUSA, by MHRD), Korea, C.G (2012-2018)

- Institutional Coordinator, Rashtriya Uchatar Shiksha Abhiyan (RUSA, by MHRD), Govt. R.P.S. Post Graduate College, Baikunthpur (2012-2018)
- Coordinator, District Quality Circle” for up-gradation of education and NAAC of colleges, Korea, Chhattisgarh (2012-2018)
- Programme Officer, National Service Scheme, Govt. R.P.S. Post Graduate College, Baikunthpur (2013-2016)
- Nodal Officer, All India Survey on Higher Education, Govt. R.P.S. Post Graduate College, Baikunthpur (2012-2018)
- Coordinator, Internal Quality Assurance Cell, Govt. R.P.S. Post Graduate College, Baikunthpur (2012-2018)
- Coordinator, National Assessment and Accreditation Council (NAAC), Govt. R.P.S. Post Graduate College, Baikunthpur (2012-2018)

International Collaborations:

1. Professor Francisco J Corpas, Spanish National Research Council, Experimental Station of Zaidín, Spain
2. Professor Shivendra V Sahi, Department of Biology, Saint Joseph’s University, University City Campus, 600 S. 43rd St. Philadelphia, PA 19104, USA
3. Professor Marian Brestic, Department of Plant Physiology, Slovak Agricultural University, Tr. A. Hlinku 2, 949 76 Nitra, Slovak Republic
4. Professor Zhong-Hua Chen, School of Science, Western Sydney University, Penrith, NSW, Australia
5. Professor Lam-Son Phan Tran, Institute of Genomics for Crop Abiotic Stress Tolerance, Department of Plant and Soil Science, Texas Tech University, Lubbock, TX 79409, USA
6. Professor Jose Peralta-Videa, Department of Chemistry and Biochemistry, The University of Texas at El Paso, 500 West University Ave., El Paso, TX, 79968, USA
7. Professor Vasileios Fotopoulos, Cyprus University of Technology, Limassol, Cyprus
8. Professor Luisa M. Sandalio, Spanish National Research Council, Experimental Station of Zaidín, Spain
9. Professor Andrzej Bajguz, Institute of Biology, Faculty of Biology and Chemistry, University of Białystok, 1J Ciolkowskiego St. 15-245 Białystok, Poland
10. Professor Marek Vaculík, Department of Plant Physiology, Faculty of Natural Sciences, Comenius University in Bratislava, Mlynská dolina B2, SK-842 15 Bratislava, Slovakia
11. Dr. Gea Guerriero, Senior Research and Technology Associate, Luxembourg Institute of Science and Technology, Luxembourg

Technical Expertise: Biochemical and molecular handlings, FourPen FP 100, Leica DMLB Microscope, qRT-PCR, Olympus CX43 Fluorescence Microscope; UV-Visible Spectrophotometer, Protein separation (SDS-PAGE & NATIVE-PAGE).

Computer Proficiency: MS Windows, MS office, PowerPoint, Adobe Photoshop, SPSS, Minitab, Statistica, data handling and analysis, preparation of project reports and manuscripts.

Personal Details: **Marital Status:** Married, **Nationality:** Indian **DOB:** 10/08/1982

Declaration:

I hereby declare that the information given above is true and correct to the best of my knowledge and belief.

Place: Prayagraj, INDIA

Dated: July, 2023

(Vijay Pratap Singh)