

Curriculum Vitae

Dr. Akhilesh Kumar Pandey

Assistant Professor

Department of Basic Sciences, College of Horticulture

Sardar Vallabhbhai Patel University of Agriculture & Technology

Modipuram, Meerut-250110, Uttar Pradesh, India

Email Id: akppdy008@gmail.com akhilbiochem@svpuat.edu.in

Contact No: 831859749



OBJECTIVE

To build a carrier in growing organization where I can get opportunity to prove my abilities by accepting challenges, fulfilling's the organizational goal and climbs the carrier ladder through continuous learning and commitment.

RESEARCH INTEREST: Explore the abiotic stress constraint in crops under harsh environmental situations at physiological, biochemical, proteomics and molecular level.

FIELD EXPERTISE: Morphological markers, ROS determination and its localization, Membrane integrity, Lipid Peroxide and their localization in tissues, Heavy metals, Hydrogen sulphide, Spectroscopy, Microscopy, Metal estimation by ICP-OES/AAS, Antioxidative defense components, Protein isolation, western blot, DNA Isolation, Real time PCR, 2D, SDS PAGE, Native PAGE etc.

EDUCATIONAL QUALIFICATIONS

Name of Degree	University/Institution	Year
Ph.D.	Banaras Hindu University	2018
M.Sc.	Banaras Hindu University	2012
B.Sc.	Banaras Hindu University	2010

AWARDS AND RECOGNITIONS

1. Banaras Hindu University Medal (**BHU Gold Medal**) for Securing First Position in M.Sc. Biochemistry Examinations, June 2012
2. Awarded **INSPIRE Fellowship** by Department of Science and Technology, Govt. of India, November-2012
3. Qualified **GATE in Life Science**, April-2012 (Conducted by IIT Delhi, India)
4. Qualified **UGC-NET** in Environmental Sciences, December 2020
5. Qualified **Common Eligibility Test** UP-2012 Conducted by Ram Manohar Lohia Faizabad University, UP, India
6. Recognizes as **top cited article author award** for publication **Stress responsive gene regulation in relation to hydrogen sulfide in plants under abiotic stress in Physiologia Plantarum, Wiley** in year **2020-2021**.
7. My research article entitled Amelioration of chromium toxicity in rice seedling using *Phyllanthus emblica* aqueous extract in relation to metal uptake and modulation of antioxidative defense **in**

Curriculum Vitae

South African Journal of Botany recognized as part of **United Nations Sustainable Development Goals**, helping to tackle some of the world's greatest challenges in year **2019-2021**.

MEMBERSHIPS

1. Indian Scientific Education and Technology
2. Society for Environment and Development
3. Indian Society of Vegetable Sciences

EXTRA CURRICULAR ACTIVITIES

1. Worked as a volunteer in **National Service Scheme (NSS)** for a period of two years at Faculty of Sciences, Banaras Hindu University, Varanasi, UP-221005, May 2008 to 2010
2. Prize and certificate for securing **3rd position** in debate competition organized by NSS, Faculty of Sciences, Banaras Hindu University, Varanasi, UP-221005, March 2010
3. Certificate for securing **2nd position** in singing competition organized by NSS, Faculty of Sciences, Banaras Hindu University, Varanasi, UP-221005, March 2010
4. Elected as **M.Sc. Class Representative by Student council**, Department of Biochemistry, Faculty of Sciences, Banaras Hindu University in year 2011-2012
5. Worked as a member for stall exhibition management at IIVR Farmer fair dated 30.1.2021

POSTER/ORAL PRESENTATIONS

1. **Oral paper presentation**, International Conference & Expo on Agriculture & Veterinary Sciences: Research & Technology” at **PJTSAU, Hyderabad, India**, Role of *Phyllanthus emblica* aqueous extract in alleviation of chromium induced toxicity in rice plants, October 2017.
2. **Poster presentation**, International Conference on Agricultural, Allied Sciences & Biotechnology for Sustainability of Agriculture, Nutrition & Food Security, Institute of Science, Banaras Hindu University, Varanasi, UP, India Chromium induced metabolic alteration and its alleviation in rice seedling, November 2017 sponsored by **Indian council of Agriculture research**
3. **Poster presentation**, India International Science Festival, Lucknow, UP, India, Young Scientist Conference under the theme Climate change and sustainability – Biodiversity & Environment, *Phyllanthus emblica* Aqueous Extract Ameliorates Chromium Toxicity in Rice Seedling by Reducing Uptake of Metal and Modulating Antioxidative Defense, October 2018 sponsored **Ministry of Science and technology, GOI New Delhi**
4. **Poster presentation**, India International Science Festival, Kolkata, WB, India, Young Scientist Conference under the theme Frontier areas of Research, Expression Pattern and Linked Co-expression Target Networks of Rice Specific miR156j under Arsenic Stress at Various Developmental Stages in Rice, November-2019 sponsored by **Department of Biotechnology, New Delhi, India.**
5. **Poster presentation**, India International Science Festival, Bhopal, MP, India, Young Scientist Conference under the theme Biodiversity and Climate change, Mitigation of salt stress by application of Titanium oxide nanoparticles via improving growth indices and antioxidative defense in wheat seedling, January-2023 sponsored by **Department of Science and Technology, New Delhi India.**

WORKSHOPS/TRAINING

Curriculum Vitae

1. Attended a **3 days** training program on **Bioinformatics: Application in Agriculture and Medical Sciences** at Centre of Bioinformatics, Faculty of Science, BHU, Varanasi, 2013.
2. Attended a **7 days'** workshop on **Discovering Statistics by MS-Excel and SPSS** at DST Centre of Interdisciplinary Mathematical Sciences, BHU, Varanasi, 2013.
3. Attended a **15 days** National Workshop on **Hands on Training on Techniques in Biotechnological Research** at Department of Biotechnology and Bioinformatics and Department of Zoology at North-Eastern Hill University, Shillong, India, 2014.
4. Attended a Science Academies Lecture-workshop on **Spectroscopy in Chemical Biology** at Department of Chemistry, Faculty of Science, BHU, Varanasi, 2014.
5. Attended a **7 days** TEQIP-II Sponsored Short Term Course on **Advances in Bioscience and Bioengineering** at CMDR, Motilal Nehru National Institute of Technology, Allahabad, 2016.
6. Attended **7 days** online Faculty Development Program on **Research Analysis and Methodology Skills** at Faculty of Education, Invertis University, Bareilly-243123, UP, India, 2-8 March, 2022
7. Attended **7 Days** Faculty Development Program on **Tools and Techniques in Translational Research** at Faculty of Science, Invertis University, Bareilly-243123, UP, India, 18-23 July, 2022
8. Attended **10 days** **NEP 2020 Orientation & Sensitization Programme** under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) Organized by **UGC-Malaviya Mission Teacher Training Centre**, National Institute of Educational Planning and Administration, New Delhi, from 03-12 January 2024.
9. Attended **5 days multidisciplinary online faculty development program** on Exploring Scientific Frontiers in Biology and Biomedicine by School of Sciences, Department Of Biotechnology, Microbiology and Forensic Sciences from 15-19 July 2024.

RESEARCH PUBLICATIONS

1. Balyan, G, **Pandey, AK** (2024) Root exudates, the warrior of plant life: Revolution below the ground. **South African Journal of Botany**, 164, pp.280-287.
2. **Pandey AK**, Gautam A, Singh AK (2023) Insight to chromium homeostasis for combating chromium contamination of soil: Phytoaccumulators-based approach. **Environmental Pollution**, 121163. <https://doi.org/10.1016/j.envpol.2023.121163> IF-9.98
3. **Pandey AK**, Gautam A, Dubey RS (2021) Effect of chromium on protein oxidation, protease activity, photosynthetic parameters and alleviation of toxicity in growing rice seedlings. **Indian Journal of Agricultural Biochemistry** 34 (1), 39-44.
4. Kaushik V, Joshi A, Tripathi K, Upadhyay S, **Pandey AK** (2021) Bioinformatics python codes: Easy approach to understand basics of python. **International Journal of Research and Analytical Reviews (IJRAR)** 8 (3), 130-139.
5. Gautam A, **Pandey AK** (2021) Aquaporins responses under challenging environmental conditions and abiotic stress tolerance in plants. **Botanical Review, Springer** 1-29. <https://doi.org/10.1007/s12229-021-09249-z> IF-4.58
6. Yadav S, Singh A, Agrihari A, **Pandey AK** Chauhan B, Gupta M, Tiwari V, Prakash, P (2021) Reversal of Efflux mediated Meropenem Resistance among Klebsiella pneumoniae isolates Underlies Synergistic activity of Galactose “clicked” Water-soluble Curcumin with Meropenem. **Antibiotics** 10(4), 388; <https://doi.org/10.3390/antibiotics10040388> IF-5.22
7. **Pandey AK**, Gautam A (2020) Stress Responsive Gene Regulation in Relation to Hydrogen Sulfide in Plants under Abiotic Stress. **Physiologia Plantarum**, 168:511-525 (Jan 9, 2020) <https://doi.org/10.1111/ppl.13064> IF-5.081

Curriculum Vitae

8. Gautam A, **Pandey AK**, Dubey RS (2020) Effect of Arsenic Toxicity on Photosynthesis, Oxidative Stress and Alleviation of Toxicity with Herbal Extracts in Growing Rice Seedlings. *Indian Journal of Agriculture Biochemistry* 32(2):143-148 <http://dx.doi.org/10.5958/0974-4479.2019.00019.4>
9. **Pandey AK**, Gedda MR, Verma AK (2020) Effect of Arsenic Stress on Expression Pattern of a Rice Specific miR156j at Various Developmental Stages and their allied Co-expression Target Networks. *Frontiers in Plant Science* 11:752 <https://doi.org/10.3389/fpls.2020.00752> IF-6.63
10. Gautam A, **Pandey AK**, Dubey RS (2019) Unravelling molecular mechanisms for enhancing Arsenic tolerance in plants: A review. *Plant Gene, Elsevier*, 23 June 2020, 100240 <https://doi.org/10.1016/j.plgene.2020.100240>
11. Gautam A, **Pandey AK**, Dubey RS (2019) *Azadirachta indica* and *Ocimum sanctum* leaf extracts alleviate arsenic toxicity by reducing arsenic uptake and improving antioxidant system in rice. *Physiology and Molecular Biology of Plants, Springer*, 26(1): 63-81 <https://doi.org/10.1007/s12298-019-00730-z> IF-3.4
12. **Pandey AK**, Gautam A, Pandey P, Dubey RS (2019) Amelioration of chromium toxicity in rice seedling using *Phyllanthus emblica* aqueous extract in relation to metal uptake and modulation of antioxidative defense. *South African Journal of Botany, Elsevier*, 121, 306–316. <https://doi.org/10.1016/j.sajb.2018.11.014> IF-3.11
13. **Pandey AK**, Gautam A, Dubey RS (2019) Transport and detoxification of metalloids in plants in relation to plant metalloid tolerance. *Plant Gene, Elsevier* 17 (2019) 100171 <https://doi.org/10.1016/j.plgene.2019.100171>
14. Singh AK, Mishra H, Firdaus Z, Aditi P, Nandy N, Sharma K, Bose P, **Pandey AK**, Chauhan BS, Neogi K, Vikram K, Srivastava A, Kar AG, Prakash P (2019). MoS₂-modified Curcumin Nanostructures: The Novel Theranostic Hybrid having Potent Antibacterial and Antibiofilm activities against Multi-Drug-Resistant Hypervirulent *Klebsiella pneumoniae*. *Chemical Research in Toxicology, ACS*, 32(8):1599-1618. <https://doi.org/10.1021/acs.chemrestox.9b00135> IF-3.973
15. Poonam Pandey, Srivastava RK, Rajpoot R, Rani A, **Pandey AK** and Dubey RS (2015) Water deficit and aluminum interactive effects on generation of reactive oxygen species and responses of antioxidative enzymes in the seedlings of two rice cultivars differing in stress tolerance. *Environmental Science and Pollution Research, Springer* 23(2):1516-1528. <https://doi.org/10.1007/s11356-015-5392-8> IF-5.19
16. Verma AK, **Pandey AK** and Dubey N (2015) Physico-Chemical Characteristics, Analytics and Metabolism of Folate in Plants. *Journal of Food Processing and Technology, Longdom* 7: 536. <http://dx.doi.org/10.4172/2157-7110.1000536> IF-1.64

BOOK CHAPTERS

1. **Pandey, A.K.** and Srivastava, N., 2025. GABA and Its Crosstalk with Other Metabolites in Relation to Abiotic Stress Responses in Plants. *GABA in Plants: Biosynthesis, Plant Development, and Food Security*, pp.43-63, **Wiley**
2. Balyan, G. and **Pandey, A.K.**, 2025. Zinc and Zinc oxide nanoparticles in heavy metal/metalloids stress management in plants. In *Zinc in Plants* (pp. 299-321) **Academic Press, Elsevier**
3. **Pandey, A.K.** and Gautam, A., 2025. Zinc deficiency and toxicity in soil and plants: causes and remediation. In *Zinc in Plants* (pp. 59-76) **Academic Press, Elsevier**

Curriculum Vitae

4. Maurya, A., Soni, M., Yadav, A., **Pandey, A.K.**, Dubey, N.K. and Dwivedy, A.K., 2025. Natural pigments: a sustainable approach to utilize agroindustrial waste. In *Sustainable Management of Agro-Food Waste* (pp. 229-247) **Academic Press, Elsevier**
5. Lahry, K., **Pandey, A.K.** and Singh, S., 2025. Role of GABA Under Bacterial Stress in Plants. *GABA in Plants: Biosynthesis, Plant Development*, (pp.263-286) **Wiley**
6. Dey, D., Hazarika, Z., **Pandey, A.K.** and Borkotoky, S., 2023. Livestock Viral Diseases and Insights into Systems Biology. In *Systems Biology, Bioinformatics and Livestock Science* (pp. 148-166). **Bentham Science Publishers.**
7. **Pandey, A.K.**, Borkotoky, S., Tripathi, K. and Gautam, A., (2024) Interplay of hydrogen sulfide and plant metabolites under environmental stress. In *H₂S in Plants* (pp. 297-317) **Academic Press, Elsevier**
8. Rai PK, Joshi A, Abraham G, Saxena R, Borkotoky S, Yadav RK, **Pandey AK**, Tripathi K (2022) Cyanobacteria as a Source of Novel Bioactive Compounds in Role of Microbes in Industrial Products and Processes (pp. 145-170) Scrivener Publisher ISBN No.9781119901198
9. Gautam A, **Pandey AK** (2022) Microbial management of crop abiotic stress: Current trends and prospects in Mitigation of Plant Abiotic Stress by Microorganisms: Applicability and future directions (Page no.53-74) **Academic Press, Elsevier**
10. Gautam A, Pandey P, **Pandey AK** (2020) Proteomics in Relation to Abiotic Stress Tolerance in Plants. In *Plant Life under Changing Environment, Responses and Management* (pp. 513-541) **Academic Press, Elsevier**
11. Pandey P, Srivastav S, **Pandey AK**, Dubey RS (2020) Abiotic stress tolerance in plants-system biology approach. In *Plant Life under Changing Environment, Responses and Management* (pp.577-609) **Academic Press, Elsevier**

Popular article Published

1. Aresnic vishashkatata: Samasya awam samadhan in Drishti magazine BHU
2. Evaluation of tomato hybrids for economical benefits In ICAR-IIVR magazine SABJI KIRAN

As Editorial member and Reviewer

1. Plant, Science Publishing Group, USA (Editorial board)
2. Journal of plant Biotechnology, Elsevier (Reviewer)
3. Plant Physiology and Biochemistry, Elsevier (Reviewer)
4. Journal of Plant Growth regulation, Springer (Reviewer)
5. Environmental Pollution, Elsevier (Reviewer)
6. Agronomy, MDPI (Reviewer)
7. International Journal of Molecular Sciences, MDPI (Reviewer)
8. Plant Growth Regulation, Springer (Reviewer)
9. Frontier in Plant Sciences (Reviewer)

