

Anket Sharma Curriculum Vitae

Research Scientist, Texas Tech University, Lubbock, USA

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Professional Experience

Dec. 1, 2022- Present: **Research Scientist**, Texas Tech University, Lubbock, USA.

Mar 2021-Present: **Adjunct Professor**, Zhejiang A&F University, China.

Oct 2022-Nov 2022: **Visiting Research Scientist**, University of California, San Diego.

April 2021-Nov 2021: **Visiting Research Scientist**- University of Maryland, College Park, USA.

April 2018-July 2020: **Post-doctoral Fellow**- Zhejiang A&F University, Hangzhou, China.

March 2017- March 2018: **Assistant Professor**- DAV University, Jalandhar, India.

Education

2013-2017 **Ph.D. Botany**—Guru Nanak Dev University, Amritsar, India.
(Thesis title: 24-epibrassinolide regulated detoxification of imidacloprid in *Brassica juncea* L.)

2012-2013 **M.Phil. Botany**—Guru Nanak Dev University, Amritsar, India.

2010-2012 **M.Sc. Botany**—Guru Nanak Dev University, Amritsar, India.

Academic/Research Awards

2022- [Highly Cited Researcher by Clarivate.](#)

2021- 2020 Reviewer Award and Travel Grant (by journal *Physiologia Plantarum*)
<https://physiologiaplantarum.org/2021/02/19/winners-of-the-reviewer-reward-2020/>

2013- Qualified Graduate Aptitude Test in Engineering (GATE) (Life Sciences), Conducted by Indian Institute of Technology, Bombay, Govt. of India.

2013- DST-INSPIRE Research Fellowship Award by Department of Science and Technology (DST), Govt. of India.

2012- 1st rank in M.Sc. (Hons.) Botany, Batch 2010-12, GNDU, Amritsar.

Editorial Responsibilities

Associate Editor- *Journal of Plant Growth Regulation* (Springer)

Associate Editor- *Gene Reports* (Elsevier)

Associate Editor- *Frontiers in Plant Science*

Associate Editor- *BMC Plant Biology*

Reviewer in Journals:

Journal of Experimental Botany

Plant and Cell Physiology

Plant Physiology and Biochemistry

Environmental and Experimental Botany

Frontiers in Plant Science

Journal of Biotechnology

Plant Growth Regulation

Journal of Plant Growth Regulation

Physiologia Plantarum

Publications Metrics

Citations = 7216

h-index = 44

<https://scholar.google.co.in/citations?user=nUh1jzQAAAAJ&hl=en>

Publications List

List of main publications

33. **Sharma A*** et al. **2022** Brassinosteroids and metalloids: regulation of plant biology. *Journal of Hazardous Materials*, 424, 127518. (***Corresponding Author**)
32. **Sharma, A***., Kapoor, D., Gautam, S., Landi, M., Kandhol, N., Araniti, F., ... & Zheng, B. (2022). Heavy metal induced regulation of plant biology: Recent insights. *Physiologia Plantarum*, e13688. (***Corresponding Author**)
31. Yan, D., Song, F., Li, Z., **Sharma, A.**, Xie, X., Wu, T., ... & Zheng, B. (2022). Application of titanium regulates the functional components of photosynthetic apparatus in grafted seedlings of *Carya cathayensis* Sarg. under shade. *Chemosphere*, 290, 133301.
30. Yang, Y., Hu, X. G., Zheng, B., Li, Y., Wang, T., **Sharma, A.**, ... & Mao, J. F. (2022). Transcriptome-wide Identification and Characterization of microRNAs and Their Targets in a Highly Adaptable Conifer *Platycladus orientalis*. *Journal of the American Society for Horticultural Science*, 147(1), 7-17.
29. Yang, Y., Mei, J., Chen, J., Gu, Y., Tang, X., Lu, H., ... & Yuan, H. (2022). Expression analysis of PIN family genes in Chinese hickory reveals their potential roles during grafting and salt stress. *Frontiers in plant science*, 13. DOI: 10.3389/fpls.2022.999990
28. Ramakrishnan, M., Papolu, P. K., Satish, L., Vinod, K. K., Wei, Q., **Sharma, A.**, ... & Zhou, M. (2022). Redox status of the plant cell determines epigenetic modifications under abiotic stress conditions and during developmental processes. *Journal of Advanced Research*. <https://doi.org/10.1016/j.jare.2022.04.007>
27. Yang, Y., Huang, Q., Wang, X., Mei, J., **Sharma, A.**, Tripathi, D. K., ... & Zheng, B. (2021). Genome-wide identification and expression profiles of ABCB gene family in Chinese hickory (*Carya cathayensis* Sarg.) during grafting. *Plant Physiology and Biochemistry*, 168, 477-487.
26. Ramakrishnan, M., Rajan, K. S., Mullasserri, S., Palakkal, S., Kalpana, K., **Sharma, A.**, ... & Wei, Q. (2022). The plant epitranscriptome: revisiting pseudouridine and 2'-O-methyl RNA modifications. *Plant Biotechnology Journal*, 20(7), 1241.
25. Bakshi, P., Chouhan, R., Sharma, P., Mir, B.A., Gandhi, S., Landi, M., Zheng, B., **Sharma, A***. and Bhardwaj, R., **2021**. Effect of Chlorpyrifos-Induced Toxicity in *Brassica juncea* L. by Combination of 24-Epibrassinolide and Plant-Growth-Promoting Rhizobacteria. *Biomolecules*, 11(6), p.877. (***Corresponding Author**)
24. Ghorbel, M., Brini, F., **Sharma, A.** and Landi, M., **2021**. Role of jasmonic acid in plants: the molecular point of view. *Plant Cell Reports*, pp.1-24.
23. Zhang, J., Jiao, Y., **Sharma, A.**, Shen, D., Wei, B., Hong, C., Zheng, B. and Pan, C., **2021**. Transcriptomic analysis reveals potential pathways associated with salt resistance in pecan (*Carya illinoensis* K. Koch). *Journal of Biotechnology*, 330, pp.17-26.
22. Kumar, V., Pandita, S., Sidhu, G.P.S., **Sharma, A.**, Khanna, K., Kaur, P., Bali, A.S. and Setia, R., **2021**. Copper bioavailability, uptake, toxicity and tolerance in plants: A comprehensive review. *Chemosphere*, 262, p.127810.

21. **Sharma, A.**, Wang, J., Xu, D., Tao, S., Chong, S., Yan, D., Li, Z., Yuan, H. and Zheng, B., **2020**. Melatonin regulates the functional components of photosynthesis, antioxidant system, gene expression, and metabolic pathways to induce drought resistance in grafted *Carya cathayensis* plants. *Science of the Total Environment*, 713, p.136675.
20. Singh, R., Kesavan, A.K., Landi, M., Kaur, S., Thakur, S., Zheng, B., Bhardwaj, R. and **Sharma, A***, **2020**. 5-aminolevulinic acid regulates Krebs cycle, antioxidative system and gene expression in *Brassica juncea* L. to confer tolerance against lead toxicity. *Journal of Biotechnology*, 323, pp.283-292. (***Corresponding Author**)
19. **Sharma, A***, Sidhu, G.P.S., Araniti, F., Bali, A.S., Shahzad, B., Tripathi, D.K., Brestic, M., Skalicky, M. and Landi, M., **2020**. The role of salicylic acid in plants exposed to heavy metals. *Molecules*, 25(3), p.540. (***Corresponding Author**)
18. **Sharma, A***, Kumar, V., Shahzad, B., Ramakrishnan, M., Singh Sidhu, G.P., Bali, A.S., Handa, N., Kapoor, D., Yadav, P., Khanna, K. and Bakshi, P., **2020**. Photosynthetic response of plants under different abiotic stresses: a review. *Journal of Plant Growth Regulation*, 39(2), pp.509-531. (***Corresponding Author**)
17. Kapoor, D., Bhardwaj, S., Landi, M., Sharma, A., Ramakrishnan, M. and **Sharma, A***, **2020**. The impact of drought in plant metabolism: how to exploit tolerance mechanisms to increase crop production. *Applied Sciences*, 10(16), p.5692. (***Corresponding Author**)
16. Rattan, A., Kapoor, D., Kapoor, N., Bhardwaj, R. and **Sharma, A***, **2020**. Brassinosteroids regulate functional components of antioxidative defense system in salt stressed maize seedlings. *Journal of Plant Growth Regulation*, 39(4). (***Corresponding Author**)
15. **Sharma, A***, Shahzad, B., Kumar, V., Kohli, S.K., Sidhu, G.P.S., Bali, A.S., Handa, N., Kapoor, D., Bhardwaj, R. and Zheng, B., **2019**. Phytohormones regulate accumulation of osmolytes under abiotic stress. *Biomolecules*, 9(7), p.285. (***Corresponding Author**)
14. **Sharma, A***, Shahzad, B., Rehman, A., Bhardwaj, R., Landi, M. and Zheng, B., **2019**. Response of phenylpropanoid pathway and the role of polyphenols in plants under abiotic stress. *Molecules*, 24(13), p.2452. (***Corresponding Author**)
13. **Sharma***, A. and Zheng, B., **2019**. Melatonin mediated regulation of drought stress: Physiological and molecular aspects. *Plants*, 8(7), p.190. (***Corresponding Author**)
12. **Sharma, A***, Yuan, H., Kumar, V., Ramakrishnan, M., Kohli, S.K., Kaur, R., Thukral, A.K., Bhardwaj, R. and Zheng, B., **2019**. Castasterone attenuates insecticide induced phytotoxicity in mustard. *Ecotoxicology and environmental safety*, 179, pp.50-61. (***Corresponding Author**)
11. **Sharma, A***, Kumar, V., Kumar, R., Shahzad, B., Thukral, A.K. and Bhardwaj, R., **2018**. Brassinosteroid-mediated pesticide detoxification in plants: A mini-review. *Cogent Food & Agriculture*, 4(1), p.1436212. (***Corresponding Author**)
10. Tanveer, M., Shahzad, B., **Sharma, A.**, Biju, S. and Bhardwaj, R., **2018**. 24-Epibrassinolide; an active brassinolide and its role in salt stress tolerance in plants: a review. *Plant Physiology and Biochemistry*, 130, pp.69-79.
9. **Sharma, A***, Kumar, V., Yuan, H., Kanwar, M.K., Bhardwaj, R., Thukral, A.K. and Zheng, B., **2018**. Jasmonic acid seed treatment stimulates insecticide detoxification in *Brassica juncea* L. *Frontiers in plant science*, 9, p.1609. (***Corresponding Author**)
8. Kohli, S.K., Handa, N., Bali, S., Arora, S., **Sharma, A.**, Kaur, R. and Bhardwaj, R., **2018**. Modulation of antioxidative defense expression and osmolyte content by co-application of 24-epibrassinolide and salicylic acid in Pb exposed Indian mustard plants. *Ecotoxicology and environmental safety*, 147, pp.382-393.
7. Yadav, P., Kaur, R., Kanwar, M.K., **Sharma, A.**, Verma, V., Sirhindi, G. and Bhardwaj, R., **2018**. Castasterone confers copper stress tolerance by regulating antioxidant enzyme responses, antioxidants, and amino acid balance in *B. juncea* seedlings. *Ecotoxicology and environmental safety*, 147, pp.725-734.

6. Kaur, P., Bali, S., **Sharma, A.**, Vig, A.P. and Bhardwaj, R., 2018. Role of earthworms in phytoremediation of cadmium (Cd) by modulating the antioxidative potential of *Brassica juncea* L. *Applied Soil Ecology*, 124, pp.306-316.
5. Kaur, R., Yadav, P., **Sharma, A.**, Thukral, A.K., Kumar, V., Kohli, S.K. and Bhardwaj, R., 2017. Castasterone and citric acid treatment restores photosynthetic attributes in *Brassica juncea* L. under Cd (II) toxicity. *Ecotoxicology and environmental safety*, 145, pp.466-475.
4. Kumar, V., **Sharma, A.**, Bhardwaj, R. and Thukral, A.K., 2017. Analysis of organic acids of tricarboxylic acid cycle in plants using GC-MS, and system modeling. *Journal of Analytical Science and Technology*, 8(1), pp.1-9.
3. **Sharma, A***, Thakur, S., Kumar, V., Kesavan, A.K., Thukral, A.K. and Bhardwaj, R., 2017. 24-epibrassinolide stimulates imidacloprid detoxification by modulating the gene expression of *Brassica juncea* L. *BMC plant biology*, 17(1), pp.1-10. (*Corresponding Author)
2. **Sharma, A***, Kumar, V., Singh, R., Thukral, A.K. and Bhardwaj, R., 2016. Effect of seed pre-soaking with 24-epibrassinolide on growth and photosynthetic parameters of *Brassica juncea* L. in imidacloprid soil. *Ecotoxicology and environmental safety*, 133, pp.195-201. (*Corresponding Author)
1. **Sharma, A.**, Bhardwaj, R., Kumar, V. and Thukral, A.K., 2016. GC-MS studies reveal stimulated pesticide detoxification by brassinolide application in *Brassica juncea* L. plants. *Environmental Science and Pollution Research*, 23(14), pp.14518-14525.

Book Edited:

1. **Managing Plant Stress Using Salicylic Acid: Physiological and Molecular Aspects** (2022)

Editors: **Anket Sharma**, Renu Bhardwaj, Vinod Kumar, Bingsong Zheng, Durgesh K. Tripathi

ISBN: 9781119671060; Publisher : Wiley, UK.

2. **Brassinosteroids in Plant Developmental Biology and Stress Tolerance** (2021)

Edited by: Golam Jalal Ahammed, **Anket Sharma**, Jingquan Yu,

ISBN: 978-0-12-813227-2, Published Academic Press, Elsevier, USA.

<https://www.amazon.com/Brassinosteroids-Developmental-Biology-Stress-Tolerance/dp/0128132272>

3. **Heavy Metals in the Environment: Impact, Assessment, and Remediation** (2020)

Edited by: Vinod Kumar, **Anket Sharma**, Artemi Cerda

ISBN 978-0128216569, Published Academic Press, Elsevier, USA.

<https://www.amazon.com/Heavy-Metals-Environment-Assessment-Remediation/dp/0128216569>

Paper Presentations

1. **Oral Presentation; Sharma, A.**, Kumar, V., Bali, S., Thukral, A.K., Bhardwaj, R. (2017). Brassinolide seed treatment modulates the enzymatic antioxidative defense system in Indian mustard under imidacloprid toxicity, at IJTA 5th International Conference on Agriculture, Horticulture and Plant Science, June 24-25th 2017, Rishikesh, India.
2. **Presented poster** at DST-SERB supported national conference on climate change: impacts, adaptation, mitigation scenario and future challenges in Indian perspective. 02-03 March, 2014. New Delhi.
3. **Participated** in National Conference on Perspectives & Trends in Plant Sciences and Biotechnology. Feb. 21-23, 2014. Organized by Department of Botany Panjab University, Chandigarh & Society of Plant Research, India.

4. **Presented Poster** at National Seminar on Trends and Advances in Plant Sciences. Sept. 21-22, 2013. Department of Botany, Aligarh Muslim University, Aligarh, India.
5. **Participated** in UGC-Sponsored CPEPA National Seminar on Recent Advances in Cancer Research Organized by Dept. of Botanical & Environmental Sciences, Guru Nanak Dev University, Amritsar, India. (March 29,2013.)
6. **Participated** in UGC-Sponsored DRS National Seminar on Environmental Conservation, Organized by Dept. of Botanical & Environmental Sciences, Guru Nanak Dev University, Amritsar, India. (March 28, 2013.)
7. **Presented poster** in National Conference on Preservation of Environment: Challenges Before Humanity, Shri Guru Granth Sahib World University, Fatehgarh Sahib, Punjab, India. (2013).
8. **Attended** International Conference on Environment & Human Health, Organized by National Environmental Science Academy, in Association with Department of Botany, JamiaHamdard at Indian National Science Academy, New Delhi, India. (Nov. 28-29, 2012).
9. **Participated** in UGC-SAP Sponsored National Seminar on Environmental Management, Organized by Dept. of Botanical & Environmental Sciences, GNDU, Amritsar, India (Mar. 22-23, 2012).
10. **Participated** in 15th Punjab Science Congress held at Guru Nanak Dev University, Amritsar, under the Aegis of Punjab Academy of Science, Patiala, India. (Feb. 7-9, 2012).
11. **Oral presentation** in Professor B.M.Johari Rolling Shield Paper Presentation Competition- 2010-2011 at Department of Botany, Delhi University, Delhi, India.

Professional development

1. DST Sponsored Brain Storming Workshop on Promoting Extramural Research in Punjab, Organized by Dept. of Botanical & Environmental Sciences, GNDU, Amritsar, India.(Feb. 12, 2013).
2. Workshop on Statistics for Ph.D./ Post Doctorate Scholars/ Faculty Members, Organized by Academic Staff College (University Grants Commission), GNDU, Amritsar, India. (Aug. 27-29, 2013)
3. National Workshop on “Advances in Biotechnology” held at Arni University, Kathgarh (Kangra), H.P.,India. (Oct.24-25, 2013).
4. Workshop on “the use of latest scientific instruments”. 18th-20th March, 2015. UGC-HRDC center, GNDU, Amritsar.
5. Global Initiative for Academic Networks (GIAN) course on “Post-transcriptional Control of Gene Expression in Eukaryotes” held in Guru Nanak Dev University, Amritsar, India.(20-25 Feb, 2017).

Links

Google Scholar: <https://scholar.google.com/citations?user=nUh1jzQAAAAJ&hl=en>

Web of Science: <https://www.webofscience.com/wos/author/record/1499614>

Research Gate: <https://www.researchgate.net/profile/Anket-Sharma-2>