CURRICULUM VITAE

Dr. Mukesh Kumar Kanwar
V.P.O: Behiyogan, Tehsil: Mukerian
District: Hoshiarpur-144222.
Research ID's: https://dhsgsu.irins.org/profile/370012
https://www.scopus.com/authid/detail.uri?authorId=35754676600
https://www.researchgate.net/profile/Mukesh_Kanwar?ev=hdr_xprf
https://scholar.google.com/citations?user=kMGtZkcAAAAJ&hl=en

E-mail: kanwarmukesh@gmail.com
Phone: +91-9463309325

A. EDUCATIONAL QUALIFICATION:

Degree	University	Name of the institution	%/CGP
Post-Doctoral Fellow	Pusan National University, South Korea	Department of Molecular Biology	----
Post-Doctoral Fellow	Zhejiang University, PR China	Department of Horticulture	----
Ph.D.	Guru Nanak Dev University, Amritsar.	Department of Botanical and Environmental Sciences.	9.56/10
Master in Env. Sciences (Hons.)	Guru Nanak Dev University, Amritsar.	Department of Botanical and Environmental Sciences.	75.44%

B. RESEARCH EXPERIENCE:

1. ***Postdoc Experience:***
   - ❖ Department of Molecular Biology, Pusan Nation University, South Korea (**Jan, 2021-March 2021**).
   - ❖ Department of Horticulture, Zhejiang University, China (**April 2016-May, 2020**).
2. ***PhD Thesis:*** "Expression of Brassinosteroids under heavy metal stress in *Brassica juncea* L. during growth"
3. ***Research area:*** Environmental Monitoring and Remediation, Water and Waste-Water Treatment, Plant-Metal Interactions, Pollutant detoxification and Environmental Toxicology.

C. RESEARCH SUMMARY:

PAPER PUBLISHED	CITATIONS	CUMMULATIVE IF	*i-10*	h-INDEX
39	**1906**	**174.8**	**31**	**23**

D. TEACHING EXPERIENCE:

- ❖ ***Assistant Professor:*** Department Environmental Sciences, Dr Harisingh Gour Vishwavidyalaya (A Central University) Sagar, Madhya Pradesh-470003, India (April, 2023 onwards).
- ❖ ***Assistant Professor:*** Department Botanical and Environmental Science, Guru Nanak Dev University, Amritsar, Punjab- 143005, India (July, 2022 – April, 2023).
- ❖ ***Assistant Professor:*** Department of Botany and Environmental Science, Sri Guru Granth Sahib World University, Fatehgarh Sahib, Punjab, India (Sep, 2012 – March, 2016).

E. **ACADEMIC HONORS**

- ❖ Awarded with best poster award at International conference on "Molecular and clinical aspect of Melatonin" organized by Chulabhorn Graduate Institute, Bangkok, Thailand.
- ❖ Qualified ARS-NET, March, 2014 (National Level Test).
- ❖ Qualified UGC-NET, June, 2012 (National Level Test).
- ❖ Awarded with DBT JRF & SRF (Project Fellowship) (July,2008 – January,2011)
- ❖ Awarded Open CSIR-SRF Fellowship (April, 2011- September, 2012)

F. **KEY PUBLICATIONS**

1. DL Xie, Huang MH, Zhou CY, Liu CX, **Kanwar M**, Qi ZY, Zhou J. (2022). HsfA1a confers pollen thermotolerance through up-regulating antioxidant capacity, protein repair and degradation in *Solanum lycopersicum* L. **Horticulture Research**. DOI: 10.1093/hr/uhac163. **(IF-7.291).**
2. Huang H, Liu CX, Yang Chen, Kanwar M, Shao S, Qi Z, Zhou J. (2022). BAG9 Confers Thermotolerance by Regulating Cellular Redox Homeostasis and the Stability of Heat Shock Proteins in *Solanum lycopersicum.* **Antioxidants.** DOI: 10.3390/antiox11081467. **(IF-7.675).**
3. Xie DL, Zheng XL, Zhou CY, **Kanwar M**, Zhou J. **(2022)**. Functions of redox signalling in pollen development and stress response. **Antioxidants**. DOI: 10.3390/antiox11020287. **(IF-7.675)**
4. Gill RA, **Kanwar MK,** dos-Reis AR, Ali B. **(2022)**. Editorial: Heavy metal toxicity in plants: Recent insights on physiological and molecular aspects. **Frontiers in Plant Science**. DOI:10.3389/fpls.2021.830682 **(IF-6.627)**
5. Jiang M, Song Y, **Kanwar MK,** Ahammed GJ, Shao S, Zhou J. **(2022)**. Phytonanotechnology applications in modern agriculture. **Journal of Nanobiotechnology**. 19 (1): 430. DOI: 10.1186/s12951-021-01176-w **(IF- 10.435)**
6. Zhang Y, Chen H, Li S, Li Y, **Kanwar MK,** Li B, Bai L, Xu J, Shi, Y. **(2021).** Comparative physiological and proteomic analyses reveal the mechanisms of brassinolide-mediated tolerance to calcium nitrate stress in tomato. **Frontiers in Plant Science.** 12: 724288 **(IF-6.627)**
7. **Kanwar MK,** Xie D, Yang C, Ahammed GJ, Hassan MK, Zhou J. **(2019).** Melatonin promotes metabolism of bisphenol A by enhancing glutathione-dependent detoxification in *Solanum lycopersicum* L. **Journal of Hazardous Material**. DOI: 10.1016/j.jhazmat.2019.121727**. (IF-14.224)**
8. **Kanwar MK,** Yu JQ, Zhou J. (**2018).** Phytomelatonin: Recent advances and future prospect. **Journal of Pineal Research**. 65 (4), e12526. **(IF-15.221)**
9. Ali S, Gill RA, Ulhassan Z, Ullah N, **Kanwar MK,** Abid M, Mwamba TM, Hunag Q, Zhou W. **(2018).** Insights on the responses of *Brassica napus* cultivars against the cobalt-stress as revealed by carbon assimilation, anatomical changes and secondary metabolites. **Environmental and Experimental Botany.** 156: 183-196. **(IF-6.028)**
10. Yadav P, Kaur R, **Kanwar MK,** Bhardwaj R, Sirhindi G, Wijaya L, Alyemeni MN, Ahmad P. **(2018).** Ameliorative role of castasterone on copper metal toxicity by improving redox homeostasis in *Brassica juncea* L. **Journal of Plant Growth Regulation**. 1-16. **(IF-4.640)**
11. Sharma A, Kumar V, Yuan H, **Kanwar MK,** Bhardwaj R, Thukral AK, Zheng B. (**2018).** Jasmonic acid seed treatment stimulates insecticide detoxification in *Brassica juncea* L. **Frontiers in plant Science.** 9:1609. **(IF-6.626)**
12. Qi ZY, Wang KX, Yan MY, **Kanwar MK,** Li DY, Wijaya L, Alyemeni MN, Ahmad P, Zhou J. **(2018).** Melatonin alleviates high temperature-induced pollen abortion in *Solanum lycopersicum.* **Molecules.** 23(2):386 **(IF-4.927)**

13. Yadav P, Kaur R, **Kanwar MK,** Sharma A, Kumar V, Sirhindi G, 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: 725-734. **(IF-7.129)**
14. Hasan MD,* Cheng Y,* **Kanwar MK,***Ahammed GJ, Qi ZY. **(2017).** Responses of plant proteins to heavy metal stress- a review. **Frontiers in Plant Science**. 8: 1492. (**Equal Contribution). (IF-6.627)**
15. **Kanwar MK,** Bajguz A, Zhou J, Bhardwaj R. **(2017).** Analysis of brassinosteroids in plants. **Journal of Plant Growth Regulation.** 36(4): 1002-1030. **(IF-4.640).**
16. Sharma A, Kumar V, **Kanwar MK,** Thukral AK, Bhardwaj R. (2017). Ameliorating imidacloprid induced oxidative stress by 24-epibrassinolide in *Brassica juncea* L. **Russian Journal of Plant Physiology.** 64 (4): 509-517 **(IF-1.419)**
17. Sharma A, Kumar V, **Kanwar MK,** Thukral AK, Bhardwaj R. **(2017).** Phytochemical profiling of the leaves of *Brassica juncea* L. using GC-MS. **International Food Research Journal.** 24(2): 547. **(IF-1.014)**
18. Sharma A, Thakur S, Kumar V, Kanwar MK, Kesavan AS, Thukral AK, Bhardwaj R, Alam P, Ahmad P. (**2016).** Pre-sowing treatment with 24-epibrassinolide ameliorates pesticides stress in *Brassica juncea* L. through the modulation of stress markers. **Frontiers in plants Science**. 7: 1569. **(IF-6.627)**
19. Sharma A, Kumar V, **Kanwar MK,** Thukral AK, Bhardwaj R. (2017). Multivariate analysis reveals the role of 24-epibarssionlide in elemental uptake by *Brassica juncea* L. under imidacloprid toxicity. **Pollution Research**. 35: 749-756. **(IF-0.516).**
20. **Kanwar MK,** Poonam, Pal S, Bhardwaj R. (**2015).** Involvement of Asada-Halliwell pathway during phytoremediation of Chromium (VI) in *Brassica juncea* L plants. **International Journal of Phytoremediation.** 17: 1237–1243. **(IF-3.212)**
21. **Kanwar MK,** Poonam, Bhardwaj R. (**2015**). Arsenic induced modulation of antioxidative defense system and brassinosteroids in *Brassica juncea* L. **Ecotoxicology and Environmental Safety.** 115:119-125. **(IF-7.129)**
22. **Kanwar MK,** Bhardwaj R, Chowdhary SP, Arora P, Sharma P, Kumar S. **(2013).** Isolation and characterization of 24-Epibrassinolide from *Brassica juncea* L. and its effects on growth, Ni uptake and antioxidant defense of Brassica plants and In vitro cytotoxicity. **Acta Physiologiae Plantarum.** 35: 1351-1362. **(IF-2.736)**
23. **Kanwar MK,** Bhardwaj R, Choudhary SP, Arora P, Sharma P,Kumar S. **(2012).** Plant steroid hormones produced under Ni stress are involved in the regulation of metal uptake and oxidative stress in *Brassica juncea* L. **Chemosphere.** 86: 41-49. **(IF-8.943)**
24. Pal S, **Kanwar M,** Bhardwaj R, Gupta BD, Yu JQ, Tran LP. **(2012).** Chromium stress mitigation by polyamine – brassinosteroids application involves phytohormonal and physiological strategies in *Raphanus sativus* L**. PLoS ONE.** 7(3)-e33210. **(IF-3.24)**
25. Arora P, Bhardwaj R, **Kanwar MK. (2012)**. Effect of 24-epibrassinolide on growth, protein content and antioxidative defense system of *Brassica juncea* L. subjected to cobalt metal toxicity**. Acta Physiologiae Plantarum**. 34: 2007–2017. **(IF-2.736)**
26. Choudhary SP, Bhardwaj R, Gupta BD, Dutt P, Gupta RK, **Kanwar MK,** Dutt P. **(2011).** Enhancing effects of 24-epibrassinolide and Putrescine on the antioxidant capacity and free radical scavenging activity of radish seedlings under Cu stress. **Acta Physiologia Plantarum.** 33:1319-1333. **(IF-2.736)**
27. Pal S, **Kanwar M,** Bhardwaj R, Gupta B, Dutt P **(2011).** Epibrassinolide ameliorates Cr (VI) stress via influencing the levels of indole-3-acetic acid, abscisic acid, polyamines and antioxidant system of radish seedlings. **Chemosphere.** 84(5):592-600. **(IF-8.943)**

28. Pal S, Bhardwaj R, Gupta BD, Dutt P, Gupta RK, Biondi S, **Kanwar M. (2010).** Epibrassinolide induces changes in indole-3-acetic acid, absicic acid and polyamine concentrations and enhances antioxidant potential of radish seedlings under copper stress. **Physiologia Plantarum.** 140:280-296. **(IF-5.081)**
29. Arora P, Bhardwaj R, **Kanwar MK. (2010).** 24-epibrassinolide induced antioxidative defense system of *Brassica juncea* L. under Zn metal stress. **Physiology and Molecular Biology of Plants.** 16(3): 285-293**. (IF-3.023)**
30. **Kanwar MK,** Arora S. (2010). Mutagenic assessment of effluents from the textile industries of Amritsar. **Journal of Chinese Clinical Medicine**. 5 (11): 645-653. **(IF-1.053)**

G. **BOOK CHAPTERS:**

1. **Kanwar MK**, Balshi P, Sharma P, Kour J, Singh AD, Dhiman S, Ibrahim M, Mir BA, Ahammed GJ, Zhou J, Bhardwaj R. **(2022**). Brassinosteroids in plant reproductive development. In: **Brassinosteroids in Plant Development Biology and Stress Tolerance**. (Ed. Ahammed GJ, Sharma A and Yu JQ). Academic Press, Elsevier. Pp, 105-130
2. **Kanwar MK,** Sun S, Chu X, Zhou J. **(2019).** Impacts of metal and metal oxide nanoparticles on plant growth and productivity. *In:* **Nanomaterial and Plant Potential** (Ed. Husen A and Iqbal M). Springer Cham. pp, 379-392.
3. Bhardwaj R, Sharma I, **Kanwar M,** Handa N, Sharma R, Kapoor D, Kaur H, Poonam. **(2012).** LEA proteins and their role in salt stress tolerance. ***In:*** **Salt Stress in Plants: Omics, Signaling and Responses** (Ed. Parvaiz Ahmed, M.M Azooz and M.N.V Prasad). Springer, The Netherlands. pp, 79-112.
4. Bhardwaj R, Sharma I, **Kanwar M,** Handa N, Sharma R, Kapoor D, Kaur H, Poonam. **(2012).** Aquaporins: Role under Salt Stress in Plants. *In:* **Ecophysiology and Responses of Plants under Salt Stress** (Ed. Parvaiz Ahmed, M.M Azooz and M.N.V Prasad). Springer, The Netherlands. pp, 213-248.
5. Bhardwaj R, Sharma I, **Kanwar MK,** Handa N, Kapoor D. **(2010).** Current scenario of applications of Brassinosteroids in Human welfare. *In:* **Practical Applications of Brassinosteroids.** Bentham science Publishers, United Arab Emirates. pp, 3-15.
6. Bhardwaj R, Sharma I, Arora N, Uppal P, **Kanwar MK. (2010).** Prospects of brassinosteroids in medicinal applications. *In:* **Brassinosteroids: A class of Plant Hormone**. Springer, Netherland. pp, 452-473.

H. **CONFERENCES:**

- International conference on Molecular and Clinical aspects of Melatonin organized by Chulabhorn Graduate Institute, Bangkok, Thailand. August 30-31, 2018.
- The third International Horticulture Research Conference organized by Nanjing Agriculture University, China. October, 16-19, 2016.
- One day workshop on Shodhganga and use of Anti-plagiarism software's "**Turnitin** and ***iThenticate***" organized by INFLINET, UGC Ahmedabad in collaboration with Bhai Gurdas Library, Guru Nanak Dev University. May, 19, 2014.

I hereby solemnly affirm that all the information given above is true to the best of my knowledge.

(Mukesh Kumar Kanwar)