

CURRICULUM VITAE



01. Name: **DR. MOHD. RAFIQ WANI**
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04. Designation: **ASSOCIATE PROFESSOR**
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10. Date of Placement to Senior Scale
Assistant Professor: **30-10-2013** (Vide Govt. Order No. **195-HE of 2015**; Dated: **23-06-2015**)
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17. Research Profile:
 - i. Books Published = 08
 - ii. Research Papers Published=36
 - iii. Book Chapters Published = 15

BOOKS PUBLISHED

1. Ahmad, P. and **M. R. Wani** (2014). *Physiological Mechanisms and Adaptation Strategies in Plants under Changing Environment* Volume 1. <http://www.springer.com/life+sciences/plant+sciences/book/978-1-4614-8590-2>; © Springer Science+Business Media New York.
2. Ahmad, P. and **M. R. Wani** (2014). *Physiological Mechanisms and Adaptation Strategies in Plants Under Changing Environment* Volume 2. <http://www.springer.com/life+sciences/plant+sciences/book/978-1-4614-8599-5>; © Springer Science+Business Media New York.
3. Ahmad, P., **M. R. Wani**, M. M. Azooz and Lom San P Tran (2014). *Improvement of Crops in the Era of Climatic Changes* Volume 1”. <http://www.springer.com/life+sciences/plant+sciences/book/978-1-4614-8829-3>; © Springer Science+Business Media New York.
4. Ahmad, P., **M. R. Wani**, M. M. Azooz and Lom San P. Tran (2014). *Improvement of Crops in the Era of Climatic Changes* Volume 2. <http://www.springer.com/life+sciences/plant+sciences/book/978-1-4614-8823-1>; © Springer Science+Business Media New York.
5. Tomlekova, N., M. I. Kozgar and **M. R. Wani** (2014). *Mutagenesis: Exploring Novel Genes and Pathways*. Wageningen Academic Publishers, Netherlands. <http://www.wageningenacademic.com/doi/book/10.3920/978-90-8686-787-5>; © Wageningen Academic Publishers, Netherland.
6. Tomlekova, N., M. I. Kozgar and **M. R. Wani** (2014). *Mutagenesis: Exploring Genetic Diversity of Crops*. Wageningen Academic Publishers, Netherlands. <http://www.wageningenacademic.com/doi/book/10.3920/978-90-8686-796-7>; © Wageningen Academic Publishers, Netherland.
7. Raina, A., **M. R. Wani**, N. Tomlekova, R. A. Laskar and S. Khan (2023). *Advanced Crop Improvement: Theory and Practice* Volume 1 © Springer-Nature Switzerland AG; <https://doi.org/10.1007/978-3-031-28146-4>
8. Raina, A., **M. R. Wani**, N. Tomlekova, R. A. Laskar and S. Khan (2023). *Advanced Crop Improvement: Case Studies of Economically Important Crops* Volume 2 © Springer-Nature Switzerland AG.

RESEARCH PAPERS PUBLISHED

1. Khan, S. and **M. R. Wani** (2003). Isolation of high yielding mutants in mungbean (*Vigna radiata* (L.) Wilczek). *Tropical Agriculturist* 154: 51-55.

2. Khan, S., **M. R. Wani**, M.D. Bhat and K. Parveen (2004). Induction of morphological mutants in chickpea. *International Chickpea and Pigeon pea Newsletter* 11: 6-7.
3. **Wani, M. R.** and S. Khan (2004). Effect of chemical mutagens on seedling growth in (*Vigna radiata* (L.) Wilczek.). *Journal of Phytological Research* 17(1): 113-114.
4. Khan, S., **M. R. Wani** and K. Parveen (2005). An induced bushy mutant in mungbean. *Mutation Breeding Newsletter & Review* (Austria) 1:10.
5. Khan, S. and **M. R. Wani** (2005). Genetic variability and correlations studies in chickpea mutants. *Journal of Cytology and Genetics* 6: 155-160.
6. Khan, S. and **M. R. Wani** (2005). Comparison on the effect of chemical mutagens on mungbean. *Advances in Plant Sciences* 18(II): 533-535.
7. Khan, S. and **M. R. Wani** (2006). MMS and SA induced genetic variability for quantitative traits in mungbean. *Indian Journal of Pulses Research* 19(1): 50-52.
8. Khan, S., **M. R. Wani** and K. Parveen (2006). Quantitative variability in mungbean induced by chemical mutagens. *Legume Research* 29(2): 143-145. (**Scopus/WOS Indexed**).
9. Khan, S., **M. R. Wani** and K. Parveen (2006). Sodium azide induced high yielding early mutant in lentil. *Agricultural Science Digest* 26(1): 65-66.
10. Khan, S. and **M. R. Wani** (2006). Genetic variability studies for seed yield and its components in mungbean (*Vigna radiata* (L.) Wilczek). *Thai Journal of Agricultural Science* 39 (1-2): 83-88. (**Scopus Indexed**).
11. **Wani, M. R.**, S. Khan and M. I. Kozgar (2011). An assessment of high yielding M₃ mutants of green gram (*Vigna radiata* (L.) Wilczek). *Romanian Journal of Biology-Plant Biology* 56(1): 29-36. (**UGC Care List Group 2**).
12. **Wani, M. R.**, S. Khan and M. I. Kozgar (2011). Induced chlorophyll mutations. I. Mutagenic effectiveness and efficiency of EMS, HZ and SA in mungbean. *Frontiers of Agriculture in China* 5(4): 514-518. (**Scopus Indexed; Impact Factor = 0.57**).
13. **Wani, M. R.**, M. I. Kozgar, S. Khan and N. A. Dar (2013). Induction of genetic variability through artificial mutagenesis in chickpea (*Cicer arietinum* L.). *Thai Journal of Agricultural Science* 46(3): 141-147. (**Scopus Indexed**).
14. **Wani, M. R.** (2017). High yielding mutants in chickpea (*Cicer arietinum* L.). *Research on Crops* 18(4): 726-729. (**Scopus Indexed**).
15. **Wani, M. R.** (2018). Early maturing mutants of chickpea (*Cicer arietinum* L.) induced by chemical mutagens. *Indian Journal of Agricultural Sciences* 88(4): 635-640. (**UGC Approved Journal**).

16. Khursheed, S., A. Raina, R. Amin, **M. R. Wani** and S. Khan (2018). Quantitative analysis of genetic parameters in the mutagenized population of faba bean (*Vicia faba* L.). *Research on Crops* 19(2): 276-284. **(Scopus Indexed)**.
17. Laskar, R. A., **M. R. Wani**, A. Raina, R. Amin and S. Khan (2018). Morphological characterization of gamma rays induced multipodding mutant (mp) in lentil cultivar Pant L-406. *International Journal of Radiation Biology*, 94 (11): 1049-1053 DOI:10.1080/09553002.2018.1511927 **(Scopus/WOS Indexed IF 1.97 (Taylor & Francis))**.
18. Amin, R., **M. R. Wani**, A. Raina, S. Khursheed and S. Khan (2019). Induced morphological and chromosomal diversity in the mutagenized population of black cumin (*Nigella sativa* L.) using single and combination treatments of gamma rays and ethyl methane sulfonate. *Jordan Journal of Biological Sciences* 12 (1): 23-30. **(WOS Indexed)**.
19. Goyal, S., **M. R. Wani** and S. Khan (2019). Comparative mutagenic analysis of gamma rays, EMS and their combination treatments in black gram (*Vigna mungo* (L.) Hepper). *Thai Journal of Agricultural Science* 52 (1): 20-33. **(WOS Indexed)**.
20. Goyal, S., **M. R. Wani**, R. A. Laskar, A. Raina and S. Khan (2019). Assessment on cytotoxic and mutagenic potency of gamma rays and EMS in *Vigna mungo* (L.) Hepper. *Biotechnología Vegetal* 19(3): 193 – 204. **(WOS Indexed)**.
21. Goyal, S., **M. R. Wani**, R. A. Laskar, A. Raina, R. Amin and S. Khan (2019). Induction of morphological mutations and mutant phenotyping in black gram (*Vigna mungo* (L.) Hepper) using gamma rays and EMS. *Vegetos* <https://doi.org/10.1007/s42535-019-00057-w> **(Scopus Indexed)**.
22. Raina, A., R. A. Laskar, Y. R. Tantary, S. Khursheed, **M. R. Wani** and S. Khan (2020). Characterization of induced high yielding cowpea mutant lines using physiological, biochemical and molecular markers. *Scientific Reports* 10:3687 <https://doi.org/10.1038/s41598-020-60601-6>. **(Scopus/WOS Indexed IF=4.2)**.
23. Goyal, S., **M. R. Wani**, R. A. Laskar, A. Raina and S. Khan (2020). Mutagenic effectiveness and efficiency of individual and combination treatments of gamma rays and ethylmethane sulfonate in black gram (*Vigna mungo* (L.) Hepper). *Advances in Zoology and Botany* 8(3): 163-168 **(UGC Care List Group 2)**.
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25. **Wani, M. R.** (2020). Characterization of chlorophyll deficient mutants in mungbean (*Vigna radiata* (L.) Wilczek). *Bangladesh Journal of Botany* 49(4): 1013-1019. **(Scopus/WOS Indexed)**.

26. **Wani, M. R.** (2021). Comparative biological sensitivity and mutability of chemo-mutagens in lentil (*Lens culinaris* Medik). *Legume Research* 44(1): 26-30. DOI: 10.18805/LR-4058. (*Scopus/WOS Indexed*).
27. **Wani, M. R.,** R. A. Laskar, A. Raina, S. Khan and T.U. Khan (2021). Application of chemical mutagenesis for improvement of productivity traits in lentil (*Lens culinaris* Medik). *Annals of Biology* 37 (1): 69-75. (*Scopus Indexed*).
28. Goyal, S., **M. R. Wani,** A. Raina, R. A. Laskar and S. Khan (2021). Phenotypic diversity in mutagenized population of urdbean (*Vigna mungo* (L.) Hepper). *Heliyon* 7: e06356. (*WOS/Scopus IF: 2.85*).
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30. Raina, A., R. A. Laskar, **M. R. Wani,** B. L. Jan, S. Ali and S. Khan (2022). Comparative mutagenic effectiveness and efficiency of gamma rays and sodium azide in inducing chlorophyll and morphological mutants of cowpea. *Plants* 11(10), 1322; <https://doi.org/10.3390/plants11101322>. (*Scopus Indexed IF: 3.935*).
31. Raina, A., R. A. Laskar, **M. R. Wani,** B. L. Jan., S. Ali and S. Khan (2022). Gamma rays and sodium azide induced genetic variability in high-yielding and biofortified mutant lines in cowpea (*Vigna unguiculata* (L.) Walp.). *Frontiers in Plant Science-Plant Breeding* 13:911049. doi: 10.3389/fpls.2022.911049. (*WOS Indexed IF: 5.753*).
32. Rasik, S., A. Raina, R. A. Laskar, **M. R. Wani,** Z. A. Reshi, S. Khan and A. R. Ndhlala (2022). Lowe doses of sodium azide and methyl methane sulphonate improved yield and pigment contents in vegetable cowpea (*Vigna unguiculata* (L.) Walp.). *South African Journal of Botany, Elsevier* 148:1-10. (*Scopus/WOS Indexed; IF=2.315*).
33. Raina, A., **M. R. Wani,** R. A. Laskar and S. Khan (2022). Chemical mutagenesis: role in breeding and biofortification of lentil (*Lens culinaris* Medik) mutant lines. *Molecular Biology Reports*, Springer Nature <https://doi.org/10.1007/s11033-022-07678-6>. (*Scopus/WOS Indexed IF=2.31*).
34. **Wani, M. R.** (2024). Comparative mutagenic analysis in M₁ generation of mungbean (*Vigna radiata* (L.) Wilczek). *Journal of Tropical Agriculture*: 62(2): 265-271. (*Scopus Indexed*).
35. **Wani, M. R.** (2025). Genetic variability for seed yield and its related traits in M₃ mutants of green gram (*Vigna radiata* (L.) Wilczek). *Journal of Tropical Agriculture*: 63(1): 36-42. (*Scopus Indexed*).

36. Laskar, R.A., **Wani, M. R.**, Jahan, R. and Khan, S. (2025). Induction of short stature and early maturity in lentil (*Lens culinaris* Medik). *Journal of Agriculture and Natural Resources* 8(1): 1-9.

BOOK CHAPTERS PUBLISHED

1. Kozgar, M. I., **M. R. Wani**, S. Khan and P. Ahmad (2014). Mineral bioavailability through mutation breeding in pulse crops: a review. *In: Ahmad, P., M. R. Wani, M. M. Azooz and Lom San P Tran (Eds.), Improvement of Crops in the Era of Climatic Changes Volume 1*, pp: 191-204; DOI 10.1007/978-1-4614-8830-9_8, © Springer Science+Business Media New York 2014.
2. Kozgar, M. I., S. Hussain, **M. R. Wani** and S. Khan (2014). The role of cytological aberrations in crop improvement through induced mutagenesis. *In: Ahmad, P., M. R. Wani, M. M. Azooz and Lom San P. Tran (Eds.), Improvement of Crops in the Era of Climatic Changes”, Volume 2*, pp. 283-296; DOI 10.1007/978-1-4614-8824-8_11, © Springer Science+Business Media New York 2014.
3. Kozgar, M. I., **M. R. Wani**, N. B. Tomlekova and S. Khan (2014). Induced mutagenesis in edible crop plants and its impact on human beings. *In: N. B. Tomlekova, M. I. Kozgar and M. R. Wani (Eds.), Mutagenesis: Exploring Novel Genes and Pathways*, Wageningen Academic Publishers, Netherland, pp. 167-180. DOI: 10.3920/978-90-8686-787-5_7, © Wageningen Academic Publishers 2014
4. Kozgar, M. I., **M. R. Wani**, N. B. Tomlekova and S. Khan (2014). Surface graph and densitometric SDS-PAGE studies in chickpea mutants. *In: N. B. Tomlekova, M. I. Kozgar and M. R. Wani (Eds.), Mutagenesis: Exploring Novel Genes and Pathways*, Wageningen Academic Publishers, Netherland, pp. 279-288. DOI: 10.3920/978-90-8686-787-5_14, © Wageningen Academic Publishers 2014.
5. Tomlekova, N. B., O. Timin, Y. Arnaoudova, O. Timina, **M. R. Wani** and M. I. Kozgar (2014). Trends and achievements in F₁ hybrids of sweet pepper utilizing induced male sterility. *In: N. B. Tomlekova, M. I. Kozgar and M. R. Wani (Eds.), Mutagenesis: Exploring Genetic Diversity of Crops*, Wageningen Academic Publishers, Netherland, pp. 15-40; DOI: 10.3920/978-90-8686-796-7_1, © Wageningen Academic Publishers 2014.
6. **Wani, M. R.**, M. I. Kozgar, N. B. Tomlekova and S. Khan (2014). Selection for polygenic variability in early mutant generations of mungbean (*Vigna radiata* (L.) Wilczek). *In: N. B. Tomlekova, M. I. Kozgar and M. R. Wani (Eds.), Mutagenesis: Exploring Genetic Diversity of Crops*, Wageningen Academic Publishers, Netherland, pp. 213-232. DOI: 10.3920/978-90-8686-796-7_10, © Wageningen Academic Publishers 2014.

7. Raina, A., S. Khan, **M. R. Wani**, R. A. Laskar and W. Mushtaq (2019). Chickpea (*Cicer arietinum* L.). Cytogenetics, genetic diversity and breeding. *In: Al-Khayri, J. M., S. M. Jain and D. V. Johnson (Eds.), Advances in Plant Breeding Strategies: Legumes*, © Springer Nature Switzerland AG https://doi.org/10.1007/978-3-030-23400-3_3
8. Laskar, R. A., S. Khan, C. R. Deb, N. Tomlekova, **M. R. Wani**, A. Raina and R. Amin (2019). Lentil (*Lens culinaris* Medik.) diversity, cytogenetics and breeding. *In: Al-Khayri, J. M., S. M. Jain and D. V. Johnson (Eds.), Advances in Plant Breeding Strategies: Legumes*, © Springer Nature Switzerland AG https://doi.org/10.1007/978-3-030-23400-3_9
9. **Wani, M.R.**, A. Raina, S. Yaqoob, R. A. Laskar, S. Khan and T. A. Bhat (2023). Induced mutagenesis: A successful breeding strategy for crop improvement. *In: Bhat, T. A. and Hakeem, K. R. (Eds.), Biotechnologies and Genetics in Plant Mutation Breeding*, Volume 1: © 2023 Apple Academic Press, Inc. Co-published with CRC Press (Taylor & Francis). pp. 69-87.
10. Raina, A., R. A. Laskar, **M. R. Wani** and S. Khan (2023). Role of mutation and molecular breeding in the improvement of cowpea, a primary pulse crop. *In: Bhat, T. A. and Hakeem, K. R. (Eds.), Biotechnologies and Genetics in Plant Mutation Breeding*, Volume 3: © 2023 Apple Academic Press, Inc. Co-published with CRC Press (Taylor & Francis). pp-53-83.
11. Laskar, R. A., A. Raina, N. Sheikh, **M. R. Wani** and S. Khan (2023). Mutagenesis in genetic improvement of lentil: development of multipodding mutant via gamma rays. *In: Bhat, T. A. and Hakeem, K. R. (Eds.), Biotechnologies and Genetics in Plant Mutation Breeding*, Volume 3: © 2023 Apple Academic Press, Inc. Co-published with CRC Press (Taylor & Francis). pp-253-279.
12. Raina, A., R.A. Laskar, **M. R. Wani**, N. Tomlekova and S. Khan (2023). Plant breeding from classical genetics to molecular approaches for food and nutrition security. *In: Raina, A., M. R. Wani, R. A. Laskar, N. Tomlekona and S. Khan (Eds.), Advanced Crop Improvement: Theory and Practice Volume 1*, Springer-Nature Switzerland AG; doi: https://doi.org/10.1007/978-3-031-28146-4_1, pp. 1-32.
13. Tomlekova, N., V. S. Apostolova, P. Nikolay, P. Ivelin, S. Fatma, **M. R. Wani** and K.M. Seibt (2023). Applicability of ISAP and RAPD techniques for *Capsicum* collection genotyping. *In: Raina, A., M. R. Wani, R. A. Laskar, N. Tomlekova and S. Khan (Eds.), Advanced Crop Improvement*, Volume 2. Springer, Cham. https://doi.org/10.1007/978-3-031-26669-0_3

14. Raina, A., R. A. Laskar, **M. R. Wani** and S. Khan (2023). Improvement of yield in cowpea varieties using different breeding approaches. *In: Raina, A., **M. R. Wani**, R. A. Laskar, N. Tomlekova and S. Khan (Eds.), **Advanced Crop Improvement**, Volume 2. Springer, Cham.*
https://doi.org/10.1007/978-3-031-26669-0_6
15. **Wani, M. R.**, A. Raina, N. Tomlekova, R. A. Laskar, M. Feroz and S. Khan (2023). Induced mutagenesis-a reliable technology to overcome the limitations of low genetic variability in lentils. *In: Raina, A., **M. R. Wani**, R. A. Laskar, N. Tomlekova and S. Khan (Eds.), **Advanced Crop Improvement**, Volume 2. Springer, Cham.*
https://doi.org/10.1007/978-3-031-26669-0_9

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