

Name: **Dr. Imtiyaz Hussain**

Designatio: Assistant Professor (Botany)



### **Educational Qualification**

1. High school - C.B.S.E, 2005, First division.
2. Intermediate - C.B.S.E, 2007, First division.
3. B. Sc. - University of Jammu, 2011, First division.
4. M. Sc. (Botany) - University of Allahabad (A.U.), 2013, First division
5. CRET - University of Allahabad, 2013.
6. GATE - Life Science, 2014.
7. CSIR-UGC, JRF (NET) - Life Science, 2014.
8. Ph. D. (D. Phil.) - University of Allahabad, 2019

### **Address**

#### **Work**

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## List of Publications

1. **Imtiyaz Hussain**, Ajey Singh, N. B. Singh, Aishwarya Singh and Pooja Singh. Plant-nanoceria interaction: Toxicity, accumulation, translocation and biotransformation. *South African journal of Botany*. 121:239–247 (2019). ISSN 0254-6299. **Impact factor- 2.442**. DOI: [10.1016/j.sajb.2018.11.013](https://doi.org/10.1016/j.sajb.2018.11.013)
2. Ajey Singh, **Imtiyaz Hussain**, NB Singh, Himani Singh (2019). Uptake, translocation and impact of green synthesized nanoceria on growth and antioxidant enzymes activity of *Solanum lycopersicum L.* *Ecotoxicology and Environmental Safety* 182 (2019) 109410. ISSN: 0147-6513. **Impact factor- 4.82**. DOI: [10.1016/j.ecoenv.2019.109410](https://doi.org/10.1016/j.ecoenv.2019.109410)
3. **Imtiyaz Hussain**, NB Singh, Ajey Singh, Himani Singh, SC Singh and Vijaya Yadav (2017). Exogenous application of phytosynthesized nanoceria to alleviate ferulic acid stress in *Solanum lycopersicum*. *Scientia Horticulturae* 214 (2017) 158–164. ISSN 0304-4238. **Impact factor- 3.72**. DOI: [10.1016/j.scienta.2016.11.032](https://doi.org/10.1016/j.scienta.2016.11.032)
4. **Imtiyaz Hussain**, NB Singh, Ajey Singh and Himani Singh (2017). Allelopathic potential of sesame plant leachate against *Cyperus rotundus L.* *Annals of Agrarian Science*: 15 (2017) 141-147. ISSN 1512-1887. DOI: [10.1016/j.aasci.2016.10.003](https://doi.org/10.1016/j.aasci.2016.10.003)
5. **Imtiyaz Hussain**, NB Singh, Ajey Singh, Himani Singh and SC Singh (2016). Green synthesis of nanoparticles and its potential application. *Biotechnology letters*: 38(4), 545-560. ISSN 1573-6776. **Impact factor- 1.93**. DOI: [10.1007/s10529-015-2026-7](https://doi.org/10.1007/s10529-015-2026-7)
6. Ajey Singh, N. B. Singh, Shadma Afzal, Tanu Singh and **Imtiyaz Hussain** (2017). Zinc oxide nanoparticles: a review of their biological synthesis, antimicrobial activity, uptake, translocation and biotransformation in plants. *Journal of Materials Science* 53:185–201. ISSN 0022-2461. **Impact factor- 3.442**. DOI: [10.1007/s10853-017-1544-1](https://doi.org/10.1007/s10853-017-1544-1)
7. Ajey Singh, NB Singh, **Imtiyaz Hussain**, Himani Singh (2017). Effect of biologically synthesized copper oxide nanoparticles on metabolism and antioxidant activity to the crop plants *Solanum lycopersicum* and *Brassica oleracea* var. botrytis. *Journal of Biotechnology*. 262:11–27. ISSN 0168-1656. **Impact factor -3.163**. DOI: [10.1016/j.jbiotec.2017.09.016](https://doi.org/10.1016/j.jbiotec.2017.09.016)
8. Himani Singh, NB Singh, Ajey Singh and **Imtiyaz Hussain** (2017). Exogenous Application of Salicylic Acid to Alleviate Glyphosate Stress in *Solanum lycopersicum*. *International journal of vegetable science*. 1-15 (2017). ISSN 1931-5279 **Impact factor- 0.46**. DOI: [10.1080/19315260.2017.1347845](https://doi.org/10.1080/19315260.2017.1347845)
9. Himani Singh, NB Singh, Ajey Singh, **Imtiyaz Hussain** and Vijaya Yadav (2017). Physiological and biochemical roles of nitric oxide against toxicity produced by glyphosate herbicide in *Pisum sativum*. *Russian Journal of Plant Physiology*, Vol. 64, No. 4, pp. 518–524. ISSN 1021-4437 **Impact factor- 0.73**. DOI: [10.1134/s1021443717040136](https://doi.org/10.1134/s1021443717040136)
10. Himani Singh, NB Singh, Ajey Singh, **Imtiyaz Hussain** and Vijaya Yadav (2016). Physiological and biochemical effects of salicylic acid on *Pisum sativum* exposed to isoproturon. *Archives of Agronomy and Soil Science*. 62 (10) 1425–1436. ISSN 0365-

0340. **Impact factor- 2.13.** DOI: [10.1080/03650340.2016.1144926](https://doi.org/10.1080/03650340.2016.1144926)

11. Ajey Singh, NB Singh, **Imtiyaz Hussain**, Himani Singh, Vijaya Yadav and SC Singh (2016). Green synthesis of nano zinc oxide and evaluation of its impact on germination and metabolic activity of *Solanum lycopersicum*. *Journal of Biotechnology* 233: 84–94. ISSN 0168-1656. **Impact factor- 3.163.** DOI: [10.1016/j.jbiotec.2016.07.010](https://doi.org/10.1016/j.jbiotec.2016.07.010)
12. NB Singh, Ajey Singh, **Imtiyaz Hussain**, Himani Singh and SC Singh (2015). Synthesis, Characterization and Application of Ruthenium Oxide Nanoparticles on Growth and Metabolism of *Brassica oleracea L.* *Advance Science Letters* 21:2635-2640. ISSN 1936-7317. DOI: [10.1166/asl.2015.6430](https://doi.org/10.1166/asl.2015.6430)
13. Vijaya Yadav, NB Singh, Himani Singh, Ajey Singh and **Imtiyaz Hussain** (2018). Putrescine affects tomato growth and response of antioxidant defense system due to exposure to cinnamic acid. *International journal of vegetable science* ISSN 2349-1183. DOI: [10.1080/19315260.2018.1508110](https://doi.org/10.1080/19315260.2018.1508110)
14. Imtiyaz Hussain, Ajey Singh and N.B. Singh Plant mediated green synthesis of nanoceria: A protectant against allelopathic stress” *Proc. of the Intl. Conf. on Nanotechnology for Better Living*, 2016. DOI: [10.3850/978-981-09-7519-7nbl16-rps-7](https://doi.org/10.3850/978-981-09-7519-7nbl16-rps-7)
15. Vijaya Yadav, NB Singh, Himani Singh, Ajey Singh and **Imtiyaz Hussain** (2018). Alleviation of deleterious effects due to 2-benzoxazolinone by exogenous application of spermidine in *Solanum lycopersicum* . *International journal of vegetable science* ISSN 2349-1183. DOI: [10.1080/19315260.2018.1439553](https://doi.org/10.1080/19315260.2018.1439553)
16. Vijaya Yadav, Himani Singh, Ajey Singh and **Imtiyaz Hussain** and NB Singh (2018). Salicylic acid induced changes on some physiological parameters symptomatic for oxidative stress in Maize (*Zea mays L.*) grown under cinnamic acid stress *Russian Agricultural Science* Vol. 44, No. 1, pp. 9-17. ISSN 1934-8037. DOI: [10.3103/s1068367418010202](https://doi.org/10.3103/s1068367418010202)
17. S Khare, NB Singh, A Singh, **I Hussain**, K Niharika, V Yadav, C Bano. (2020) Plant secondary metabolites synthesis and their regulations under biotic and abiotic constraints. *Journal of Plant Biology* 63 (3), 203-216. issn 1226-9239. DOI: [10.1007/s12374-020-09245-7](https://doi.org/10.1007/s12374-020-09245-7)
18. Zeba Azim, N.B. Singh, Shubhra Khare, Ajey Singh, Nimisha Amist, Niharika, Ravi Kumar Yadav, Imtiyaz Hussain (2022). Potential role of biosynthesized zinc oxide nanoparticles in counteracting lead toxicity in *Solanum lycopersicum L.*, *Plant Nano Biology* 2-1000112 ISSN: 2773-1111. DOI: [10.1016/j.plana.2022.100012](https://doi.org/10.1016/j.plana.2022.100012).
19. Ajey Singh, NB Singh, **Imtiyaz Hussain**, Himani Singh and SC Singh (2015). Plant-nanoparticle interaction: An approach to improve agricultural practices and plant productivity. *IJPSI*. 4:25-40. ISSN 2319-670X.
20. **Imtiyaz Hussain**, Ajey Singh, Himani Singh, SC Singh and NB Singh (2015). Physiological response of broccoli exposed to RuO<sub>2</sub> nanoparticle. *Tropical plant research*: 2(3): 246–252. ISSN 2349-1183.
21. Ajey Singh, NB Singh, **Imtiyaz Hussain**, Himani Singh and Vijaya Yadav (2017) Synthesis and characterization of copper oxide nanoparticles and its impact on germination of *Vigna radiata (L.) R. Wilczek*. *Tropical Plant Research* 4(2): 246–253. ISSN 2349-1183.

22. Himani Singh, NB Singh, Ajey Singh, **Imtiyaz Hussain** and Vijaya Yadav (2017). Oxidative stress induced by lead in *Vigna radiata* L. seedling attenuated by exogenous nitric oxide. *Tropical Plant Research* 4(2): 225–234. ISSN 2349-1183.
23. Vijaya Yadav, NB Singh, Himani Singh, Ajey Singh and **Imtiyaz Hussain** (2016). Allelopathic invasion of alien plant species in India and their management strategies: A Review. *Tropical plant research*: 3(1): 87–101. ISSN 2349-1183.

#### **Awards**

1. Awarded CSIR, UGC -NET JRF Fellowship
2. Awarded as recognized reviewer by Journal of Biotechnology, in March 2019
3. Awarded as recognized reviewer by the Journal, Ecotoxicology and Environmental Safety in January 2019

#### **Conference / Workshops / Seminar attended:**

- 1) 128<sup>th</sup> Orientation Programme held at UGC-HRDC, University of Allahabad, Prayagraj, 28 Jan to 18<sup>th</sup> Feb, 2020.
- 2) Attended two day national seminar cum workshop on “Skill Development in Biotechnology” at S.P. College, Srinagar (20-21 November, 2017).
- 3) Presented paper entitled “Green synthesis of nanoparticles and its applications in three day national on Disaster resilience of Kashmir in the face of climate change, at GDC Bemina, Srinagar (13<sup>th</sup> to 16<sup>th</sup> November, 2017).
- 4) Fifth international conference on “Plants & Environmental Pollution” held at CSIR-NBRI, Lucknow February 24-27, 2015. Poster presentation “Effect of RuO<sub>2</sub> nanoparticles on growth and metabolism of broccoli seedlings”.
- 5) National symposium on science and technology for human development organized by Allahabad Chapter of Indian Science Congress Association March 14-15, 2015. Oral presentation “Effect of Sesame leachate on sprouting and growth of *Cyperus rotundus*”
- 6) Attended self financed short term course on biotechnology, health and diagnostics organized at MNIT Allahabad January 24-28, 2015.
- 7) Participated in National workshop on Technological Innovations in agriculture, Society of biological sciences and rural development Allahabad (U.P) and in collaboration with krishi vigyan kendra-II, katiya sitapur December 13-20, 2015.

- 8) International conference on current scenario and prospects of nanotechnology and biostatistics held at UPRTOU, Allahabad, February 25-26, 2016 Oral presentation, Green synthesis of nanoaptilces and its application
- 9) International conference on “Nanotechnology for better living” organized by NIT Srinagar and IIT Kanpur, May 25-29, 2016 Poster presentation “Plant mediated green synthesis of nanoceria: A protectant against allelopathic stress”
- 10) TEQIP-II sponsored short term course on advances in bioscience and bioengineering at MNNIT Allahabad, October, 19-25, 2016.

**Orientation Program/ Refresher course**

1. UGC Sponsored 126<sup>th</sup> Orientation Programme held at UGC-HRDC, University of Allahabad, Prayagraj, 28 Jan, to 17<sup>th</sup> Feb, 2020.
  2. UGC Sponsored Online Refresher course in Botany organized by UGC-HRDC Madras University w.e.f 15<sup>th</sup> to 28<sup>th</sup> March 2021.
  3. UGC Sponsored Online Refresher course in Life Science organized by UGC-HRDC Gauhati University w.e.f 15<sup>th</sup> to 28<sup>th</sup> March 2021.
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