

# Dr. ANDLEEB ZEHRA

Pune, Maharashtra, India,  
07379196096  
andleebzehra80@gmail.com

## OBJECTIVE

To secure a position with an established organization with a stable environment that will lead to a lasting relationship in the field of academics, research and development.

## EDUCATION

**Ph.D. (Botany; Mycopathology and Microbial Technology) (2011-2016)**  
Banaras Hindu University, Varanasi, India

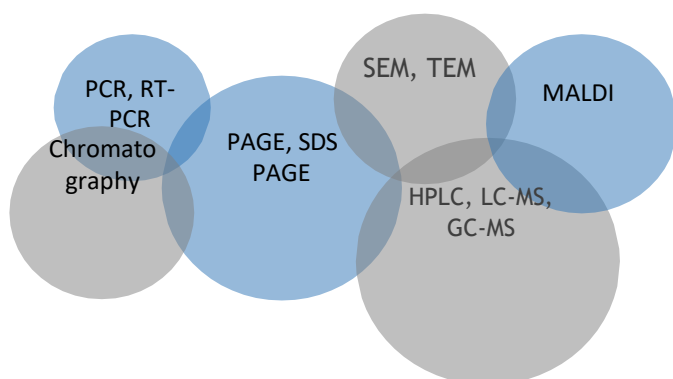
Elicitation of defense related molecules caused by biological and chemical inducers against Fusarium wilt of tomato

**Masters of Science (2008-2010)**  
[Botany][79.33%]  
Purvanchal University, Jaunpur, U.P (India)

**Bachelor in Science (2005-2008)**  
Zoology, Botany and Chemistry [69.22%]  
Purvanchal University, Jaunpur, U.P. (India)

## KEY POSITIONS & SKILLS

Member of Mycological Society of India (AM-02-16)  
Life Member of Asian PGPR Society of Sustainable Agriculture (1309/490)



## EXPERIENCE

### Guest Faculty

Department of Botany  
Mahila Maha Vidyalaya  
Banaras Hindu University, Varanasi  
2013-2016 (3 years)

### Assistant Professor

Sandip University, Nasik  
(September 2018- February 2019)

- Worked as an Assistant Professor in Life Sciences (Botany) Department of Sandip University, Nasik

### Dr. D S Kothari Post Doctoral Fellow

Department of Botany, Savitribai Phule Pune University (SPPU), Pune  
(July 2019- March 2022)

- Worked as a Dr. D. S. Kothari Post Doctoral Fellow in Botany Department of SPPU, Pune

## PUBLICATIONS

- International journal-23
- National Journal- 5
- Conference-14
- Book chapter-17
- Google Scholar Details:

(<https://scholar.google.co.in/citations?user=uZjy9TkAAAAJ&hl=en>)

1. Citations- 906
2. H Index – 16
3. I-10 index- 23

## Personal Details

Name of Father: Late Syed Zargham Haider

Name of Husband: Dr. Syed Akbar Ahmad

Date of Birth: 14/03/1989

Category: General

Languages: English, Hindi, Urdu

Nationality: Indian

## Conference Presentations

### Conference talks

4. National Symposium on Biology of Infection, Immunity and Disease Control in Pathogen-Plant Interactions, **University of Hyderabad**, Dec. 2-4, 2011.
5. National Conference on Impact of Global Warming and Climate change on Diversity: The Challenge of Conservation of Flora and Fauna, **R. H. S. P. G. College, Jaunpur**, Feb. 21-22, 2012.
6. International Conference on Mycology and Plant Pathology Biotechnological Approaches, **Banaras Hindu University, Varanasi**, Feb. 27-29, 2012.
7. International Conference on Global Scenario of Traditional system of Medicine, Ayurveda, Agriculture and Education, **Banaras Hindu University, Varanasi**, Feb. 21-22, 2013.
8. National Seminar on Impact of Organic Farming in Sustainable Rural Development through Agriculture, **Banaras Hindu University, Varanasi**, Feb. 08-09, 2016.
9. National Conference on Emerging Trends in Fungal Biology and Plant Protection, 42<sup>nd</sup> Annual Meeting of the Mycological Society of India (MSI), **Banaras Hindu University, Varanasi**, Feb. 16-18, 2016.
10. International Conference on Advances in Applied Science and Environmental Technology, **Institute of Research Engineers and Doctors, Thailand**, May 7-8, 2016.
11. National Symposium on Issues and Challenges in Ecological Sciences, **Banaras Hindu University, Varanasi**, Feb. 23-25, 2017.

### Conference posters

12. International Conference on Emerging Trends in Management, Engineering, Law, Technology and Science, **Sandip University, Nasik**, Dec. 3-5, 2018.
13. National Conference on Biology and Bioinformatics of economically important plants and microbes, **University of North Bengal**, Feb. 17-19, 2012.
14. National Seminar on Recent Advances and New Inclinations in Biological Sciences, **Sam Higginbottom Institute of Agriculture Technology and Sciences, Allahabad**, Apr. 18, 2012.
15. International Conference on Health, Environment and Industrial Biotechnology, **Motilal Nehru National Institute of Technology, Allahabad**, Nov. 21-23, 2013.
13. 4<sup>th</sup> International Science Congress Association, **Pacific University, Rajasthan**, Dec. 8-9, 2014.
14. National Symposium on Impact of Climate Change on Plant-Microbe Interactions and its Implications, **Banaras Hindu University, Varanasi**, Dec. 18-19, 2015.

## Workshops

National Workshop on Microbial Diversity: Exploration and Perspectives, **Maharshi Dayanand University, Rohtak**, May, 3-12, 2012.

## Webinars

1. International Webinar Series on Plant Genomics organized by the Department of Botany, Savitribai Phule Pune University, Pune from 31 July-2 August 2020.
2. One day National Webinar on Cancer, Agrochemical and Agriculture organized by the Pacific Academy of Higher Education and Research University and Pacific Medical University, Udaipur on 13 June, 2021.

## Awards/Honors

1. **2016- Best Paper Award**:, International Conference on Advances in Applied Science and Environmental Technology, **Institute of Research Engineers and Doctors, Thailand**.
2. **2010- M.Sc.-University Topper, gold medal** given by the **Governor of Uttar Pradesh, India**
3. **Dr. DS Kothari Post Doctoral Fellowship**, one of the prestigious fellowships by Govt. of India, 2019.
4. Banaras Hindu University, UGC research fellowship, 2011.

## List of Publications

### Research Papers:

1. **Andleeb Zehra**, Mukesh Meena, Manish Kumar Dubey, Mohd. Aamir and R. S. Upadhyay (2017). Activation of defense response in tomato against Fusarium wilt disease triggered by *Trichoderma harzianum* supplemented with exogenous chemical inducers (SA and MeJA). Brazilian Journal of Botany, DOI:10.1007/s40415-017-0382-3.
2. **Andleeb Zehra**, Manish Kumar Dubey, Mukesh Meena, Mohd. Aamir, Laxmi Ahirwal and R. S. Upadhyay (2016). Improvement of Lycopene, Ascorbic Acid and Total Phenol Content of Postharvest Tomato Fruits by Exogenous Application of Salicylic Acid and Methyl Jasmonate. Food and Pharma International, 1:1-7.
3. **Andleeb Zehra**, Manish Kumar Dubey, Mukesh Meena, R. S. Upadhyay (2017). Effect of different environmental conditions on growth and sporulation of some *Trichoderma* species. Journal of Environmental Biology, 38:197-203.
4. **Andleeb Zehra**, Mukesh Meena, Manish Kumar Dubey, Mohd. Aamir and R. S. Upadhyay (2017). Synergistic effects of plant defense elicitors and *Trichoderma harzianum* on enhanced induction of antioxidant defense system in tomato against Fusarium wilt disease. Botanical studies, 58:44. DOI:10.1186/s40529-017-0198-2.
5. Mukesh Meena and **Andleeb Zehra** (2019). Tomato: A Model Plant to Study Plant-Pathogen Interactions. Food Science and Nutrition Technology. 4:1. DOI: 10.23880/fsnt-16000171.

6. Manish Kumar Dubey, Timothy Yong James, **Andleeb Zehra**, Mohd. Aamir and R. S. Upadhyay (2019). First report of *Newbyarecurva* (Saprolegniaceae) from India. *Nova Hedwigia*, 109: 81-93.
7. Manish Kumar Dubey, **Andleeb Zehra**, Mohd. Aamir, Mukesh Yadav, Swarnmala Samal and R. S. Upadhyay (2019). Isolation, identification, carbon utilization profile and control of *Pythium graminicola*, the causal agent of chilli damping-off. *Journal of Phytopathology*, DOI: 10.1111/jph.12872.
8. Manish Kumar Dubey, **Andleeb Zehra**, Swarnmala Samal and R. S. Upadhyay (2019). First report on *Obelidium megarhizum* (Chytridiaceae) from India. *Vegetos*, <https://doi.org/10.1007/s42535-019-00073-w>.
9. Mukesh Meena, **Andleeb Zehra**, Manish Kumar Dubey, Mohd. Aamir, Vijai Kumar Gupta and R. S. Upadhyay (2016). Comparative evaluation of biochemical changes in tomato (*Lycopersicon esculentum* Mill.) infected by *Alternaria alternata* and its toxic metabolites (TeA, AOH and AME). *Frontiers in Plant Science*, DOI: 10.3389/fpls.2016.01408.
10. Mukesh Meena, Vishal Prasad, **Andleeb Zehra**, Vijai Kumar Gupta and R. S. Upadhyay (2015). Mannitol metabolism during pathogenic fungal-host interactions under stressed conditions. *Frontiers in Microbiology*, 6:1019-1026.
11. Mukesh Meena, **Andleeb Zehra**, Manish Kumar Dubey and R. S. Upadhyay (2016). Mannitol and proline accumulation in *Lycopersicum esculentum* during infection of *Alternaria alternata* and its toxins. *International Journal of Biomedical Science and Bioinformatics*, 3:64-68.
12. Mukesh Meena, **Andleeb Zehra**, Prashant Swapnil, Manish Kumar Dubey, Chandra Bali Patel and R. S. Upadhyay (2017). Effect on lycopene,  $\beta$ -carotene, ascorbic acid and phenolic content in tomato fruits infected by *Alternaria alternata* and its toxins (TeA, AOH and AME). *Archives of Phytopathology and Plant Protection*, DOI:10.1080/03235408.2017.1312769.
13. Manish Kumar Dubey, **Andleeb Zehra**, Mukesh Meena, R. S. Upadhyay (2016). Taxonomic notes on *Allomyces neomoniliformis* (Blastocladiaceae) isolated from Nanital lake, Uttarakhand, India. *Vegetos*, 29:2.
14. Manish K. Dubey, **Andleeb Zehra**, Mohd Aamir, Mukesh Meena, Laxmi Ahirwal, Siddhartha Singh, Shruti Shukla, Ram S. Upadhyay, Ruben Bueno-Mari and Vivek K. Bajpai (2017). Improvement strategies, cost effective production and potential applications of fungal glucose ase (GOD): current updates. *Front. Microbiol.*, <https://doi.org/10.3389/fmicb.2017.01032>
15. Mukesh Meena, Prashant Swapnil, **Andleeb Zehra**, Manish Kumar Dubey & R. S. Upadhyay (2017) Antagonistic assessment of *Trichoderma* spp. by producing volatile and non-volatile compounds against different fungal pathogens. *Archives of Phytopathology and Plant Protection*. DOI:10.1080/03235408.2017.1357360
16. Mukesh Meena, Sanjay K. Gupta, Prashant Swapnil, **Andleeb Zehra**, Manish Kumar Dubey and R. S. Upadhyay (2017) *Alternaria* toxins: potential virulence factors and genes related to pathogenesis. *Front. Microbiol.* doi:10.3389/fmicb.2017.01451
17. Mohd Aamir, Vinay K. Singh, Manish Kumar Dubey, Sarvesh Pratap Kashyap, **Andleeb Zehra**, R. S. Upadhyay, Surendra Singh (2018). Structural and functional dissection of differentially

expressed tomato WRKY transcripts in host defense response against the vascular wilt pathogen (*Fusarium oxysporum* f. sp. *lycopersici*). PLOS ONE. 13(4):e0193922

18. Manish Kumar dubey, **Andleeb Zehra**, Mukesh Meena and R. S. Upadhyay (2018). Taxonomic note on a rare fish infecting Indian water mould *Achlyaambisexualis* (Achlyaceae). Indian Journal of Fisheries. 65(1):71-78.
19. Mohd Aamir, Sarvesh Pratap Kashyap, **Andleeb Zehra**, Manish Kumar Dubey, Vinay K. Singh, Waquar Akhtar Ansari, R. S. Upadhyay and Surendra Singh (2018). *Trichoderma erinaceum* bio-priming modulates the WRKYs defense programming in tomato against the *Fusarium oxysporum* f. sp. *lycopersici* (Fol) challenged Condition. Frontiers in Plant Science, doi: 10.3389/fpls.2019.00911.
20. Mukesh Meena, Kumari Divyanshu, Sunil Kumar, Prashant Swapnil, **Andleeb Zehra**, Vaishali Shukla, Mukesh Yadav and R. S. Upadhyay (2019). Regulation of L-proline biosynthesis, signal transduction, transport, accumulation and its vital role in plants during variable environmental conditions. Heliyon, 5, e02952. <https://doi.org/10.1016/j.heliyon.2019.e02952>
21. Mukesh Meena, Prashant Swapnil, Kumari Divyanshu, Sunil Kumar, Harish, Yashoda NandanTripathi, **Andleeb Zehra**, AvinashMarwal and R. S. Upadhyay (2020). PGPR mediated induction of systemic resistance and physiochemical alterations in plants against the pathogens: current perspectives. Journal of Basic Microbiology. DOI: 10.1002/jobm.202000370
22. Mukesh Meena, **Andleeb Zehra**, Prashant Swapnil, AvinashMarwal (2021). Endophytic Nanotechnology: An approach to study scope and potential applications. Frontiers in Chemistry. 2021.
23. **Andleeb Zehra**, Namita Anant Raytekar, Mukesh Meena and Prashant Swapnil (2021). Efficiency of microbial bioagents as elicitors in plant defense mechanism under biotic stress: A review. Current Research in Microbial Sciences, 2, 100054.
24. **Andleeb Zehra**, Arti Tiwari, Manish kumar Dubey and R. S. Upadhyay (2013). Assessment of the antagonistic potential of *Trichoderma* against *Fusarium oxysporum* f. sp. *lycopersici*”published in International Conference on Global Scenario of Traditional System of Medicine, Ayurveda, Agriculture and Education, RGSC, Barkachha, BHU, pp. 479-483. (ISBN 978-81-920934-1-3)
25. **Andleeb Zehra**, Mukesh Meena, Manish Kumar Dubey, Anil Kumar Singh and R. S. Upadhyay (2016). “Effect of different metals on the growth and sporulation of some *Trichoderma* species” published in proceedings of the national seminar on Impact of Organic Farming in Sustainable Rural development through Agriculture, organized by BHU-Krishi Vigyan Kendra (Institute of Agriculture Sciences), RGSC, Barkachha, Mirzapur, BHU, pp.498-502.(ISBN978-93-84215-54-5)
26. Mukesh Meena, Arti Tiwari, **Andleeb Zehra**, Vishal Prashad and R. S. Upadhyay (2013). “Morphological and Molecular Identification of *Alternaria Alternata* from Tomato”published in International Conference on Global Scenario of Traditional System of Medicine, Ayurveda, Agriculture and Education, RGSC, Barkachha, BHU, pp. 506-509.(ISBN 978-81-920934-1-3)
27. Arti Tiwari, Mukesh Meena, **Andleeb Zehra** and R. S. Upadhyay (2013) “Efficacy of *Alternaria Alternata* as Bioherbicide against Weed Species” published in International Conference on Global Scenario of Traditional System of Medicine, Ayurveda, Agriculture and Education,

RGSC, Barkachha, BHU, pp. 498-502.(ISBN978-81-920934-1-3)

28. Mukesh Meena, **Andleeb Zehra**, R. S. Upadhyay (2018). *Alternaria*: A pathogenic fungus and its control. Published in research magazine of Banaras Hindu University, Varanasi. (ISSN: 2321-2934).

## Book Chapters

1. **Book name: New and Future Developments in Microbial Biotechnology and Bioengineering: *Penicillium* System Properties and Applications**  
**Editors:** Vijai G. Gupta and Susana Rodriguez-Couto  
**Chapter 9: *Penicillium* Enzymes for the Food Industries** (Mukesh Meena, **Andleeb Zehra**, Manish Kumar Dubey, Mohd. Aamir and R. S. Upadhyay) **pp. 167–178** (ISBN: 978-0-444-63501-3) Elsevier, United states.
2. **Book Name: New and Future Developments in Microbial Biotechnology and Bioengineering: *Penicillium* System Properties and Application**  
**Editors:** Vijai G. Gupta and Susana Rodriguez-Couto  
**Chapter 14: Role of *Penicillium* species in bioremediation processes** (**Andleeb Zehra**, Manish Kumar Dubey, Mukesh Meena, Mohd. Aamir, Chandra Bali Patel and R. S. Upadhyay) **pp. 247–256**(ISBN: 978-0-444-63501-3) Elsevier, United states.
3. **Book Name: Applications of Microbial Genes in Enzyme Technology**  
**Editors:** Vijai Kumar Gupta, Maria G. Tuohy (School of Natural Sciences, National University of Ireland Galway, Galway, Ireland), Gauri Dutt Sharma (Assam University, Silchar, Assam, India) and Smriti Gaur (JIIT, Noida, India)  
**Chapter 10: Production and Technological Applications of Enzymes from Microbial Sources** (Vishal Prasad, Vivek Kumar Singh, Mukesh Meena, Arti Tiwari, **Andleeb Zehra** and R. S. Upadhyay, Department of Botany, Banaras Hindu University, Varanasi, India) **pp. 175–204**(ISBN: 978-1-62417-808-5)**Series:** Microbiology Research Advances Genetics – Research and Issues.
4. **Book Name: Microbial Diversity and Biotechnology in Food Security**  
**Editors:** R. N. Kharwar, R. S. Upadhyay, Nawal Dubey, Richa Raghuwanshi  
**Chapter 47: Fungal Toxins and Their Impact on Living Systems** (Vivek Kumar Singh, Mukesh Meena, **Andleeb Zehra**, Arti Tiwari, Manish Kumar Dubey and R. S. Upadhyay) **pp. 513–530** [ISBN 978-81-322-1800-5 ISBN 978-81-322-1801-2 (eBook)]**Series:** Springer New Delhi Dordrecht Heidelberg London New York DOI 10.1007/978-81-322-1801-2\_47, © Springer India 2014.
5. **Book Name: Fungal Biomolecules: Source Applications and recent Developments**  
**Editors:** Vijai Kumar Gupta, Robert L. Mach, S. Sreenivasaprasad  
**Chapter 24: Fungal biomolecules and their implications** (**Andleeb Zehra**, Manish Kumar Dubey, Arti Tiwari, Mukesh Meena, Punam Kumari, Vivek Kumar Singh, Vijai Kumar Gupta and R. S. Upadhyay) **pp. 363–375** [ISBN 978-1-118-95829-2] Elsevier, United States.
6. **Book Name: Advances in PGPR research**  
**Editors:** H. B. Singh, B. Kumar Sarma and C. Keswani  
**Chapter 15: The rhizosphere microbial community and methods of its analysis** (Mukesh Meena, Manish Kumar Dubey, Prashant Swapnil, **Andleeb Zehra**, Shalini Singh, Punam Kumari and R. S. Upadhyay) **pp. 275–295** [ISBN 13:978-1-78638-0325] CABI, International



7. **Book Name: Plant-Microbe Interactions in Agro-Ecological Perspectives**  
**Editors:** Dhananjaya Pratap Singh, Harikesh Bahadur Singh and PrabhaRatna  
**Chapter: Beneficial Microbes for Disease Suppression and Plant Growth Promotion** (Mukesh Meena, Prashant Swapnil, **Andleeb Zehra**, Mohd. Aamir, Manish Kumar Dubey, Jyoti Goutam and R. S. Upadhyay) **pp. 395–432** [ISBN 978-981-10-6592-7] Springer, Singapore.
  
8. **Book Name: New and Future Developments in Microbial Biotechnology and Bioengineering: Microbial Genes Biochemistry and Applications**  
**Editors:** Harikesh Bahadur Singh, Vijai Kumar Gupta and SudishaJogaiah  
**Chapter 11: Virulence Factors and their Associated Genes in Microbes**(Mukesh Meena, Prashant Swapnil, **Andleeb Zehra**, Mohd. Aamir, Manish Kumar Dubey, Chandra Bali Patel and R. S. Upadhyay) **pp. 181–208**, (DOI: <https://doi.org/10.1016/B978-0-444-63503-7.00011-5>) Elsevier, United states.
  
9. **Book Name: Microbial Endophyte: Prospects for Sustainable Agriculture**  
**Editors:** Ajay Kumar and Vipin Kumar Singh  
**Chapter: Endophytic Actinomycetes in bioactive compounds production and plant defense system** (Mohd. Aamir, Krishna Kumar Rai, **Andleeb Zehra**, Manish Kumar Dubey, SwarnmalaSamal, Mukesh Yadav and R. S. Upadhyay) **pp. 189-229**, Elsevier, Academic Press, USA.
  
10. **Book Name: Microbial Endophyte: Prospects for Sustainable Agriculture**  
**Editors:** Ajay Kumar and Vipin Kumar Singh  
**Chapter: Fungal Endophytes: Classification, Diversity, Ecological role and their relevance in Sustainable Agriculture**  
(Mohd. Aamir, Krishna Kumar Rai, **Andleeb Zehra**, Sunil Kumar, Mukesh Yadav, Vaishali Shukla and R. S. Upadhyay) **pp. 291-321**, (<https://doi.org/10.1016/B978-0-12-818734-0.00012-7>), Elsevier, Academic Press, USA.
  
11. **Book Name: Microbial Endophyte: Functional Biology and Applications**  
**Editors:** Ajay Kumar and Vipin Kumar Singh  
**Chapter: Microbial bioformulation-based plant biostimulants: a plausible approach toward next generation of sustainable agriculture**  
(Mohd. Aamir, Krishna Kumar Rai, **Andleeb Zehra**, Manish Kumar Dubey, Sunil Kumar, Vaishali Shukla and R. S. Upadhyay), (<http://dx.doi.org/10.1016/B978-0-12-819654-0.00008-9>), Elsevier, Academic Press, USA.
  
12. **Book Name: New and Future Developments in Microbial Biotechnology and Bioengineering**  
**Editors:** Vijai G. Gupta and Susana Rodriguez-Couto  
**Chapter 19: Regulation and role of metal ions in secondary metabolites production by microorganisms**  
(Manish Kumar Dubey, Mukesh Meena, Mohd. Aamir, **Andleeb Zehra** and R. S. Upadhyay)  
DOI: <https://doi.org/10.1016/B978-0-444-63504-4.00019-0>, Elsevier, 2019.
  
13. **Book Name: Climate Change and Agricultural Ecosystem; Current Challenges and Adaptation**  
**Editors:** Krishna Kumar Choudhary, Ajay Kumar and Amit Kishore Singh  
**Chapter 15: Impact of Climate Change on Soil Carbon Exchange, Ecosystem Dynamics, and Plant-Microbe Interactions**  
(Mohd. Aamir, Krishna Kumar Rai, Manish Kumar Dubey, **Andleeb Zehra**, Yashoda Nandan Tripathi, Kumari Divyanshu, SwarnamalaSamal and R. S. Upadhyay)

DOI: <https://doi.org/10.1016/B978-0-12-816483-9.00020-7>, Elsevier Inc, 2019.

**14. Book Name: Advances in Waste to energy Technologies**

**Editors:** Dr. Rajeev Pratap Singh, Dr. Vishal Prasad, Barkha Vaish

**Chapter 6: Biological Treatment of Waste: An Overview**

(**Andleeb Zehra**, R. S. Upadhyay and Akbar Ahmad) ,ISBN-9780429423376, CRC Press,Taylor and Francis Group, 2019. DOI: <https://doi.org/10.1201/9780429423376>

**15. Book Name: Microbial Biotechnology: Basic Research and Applications**

**Editors:** Joginder Singh, Ashish Vyas, Shanquan Wang and Ram Prasad

**Chapter 6: Sustainable approaches to remove heavy metals from water**

(**Andleeb Zehra**, Mukesh Meena, Prashant Swapnil, Namita Anant Raytekar and R. S. Upadhyay), ISBN 978-981-15-2816-3 ISBN 978-981-15-2817-0 (eBook),Springer Nature, Singapore, 2020.

[doi.org/10.1007/978-981-15-2817-0](https://doi.org/10.1007/978-981-15-2817-0)

**16. Book Name: Policy Issues in Genetically Modified Crops: A Global Perspective**

**Editors:** Pardeep Singh, Anwesha Borthakur, Aditya Abha Singh, Ajay Kumar and Kshitij K. Singh

**Chapter 20: Research trends in genetically modified (GM) plants**

(Krishna Kumar Rai, Mohd. Aamir, **Andleeb Zehra** and Avinash Chandra Rai)

[http://dx.doi.org/10.1016/B978-0-12-820780-2.00020-0](https://dx.doi.org/10.1016/B978-0-12-820780-2.00020-0), Elsevier Inc.2020

**17. Book Name: Food Security and Plant Disease Management**

**Editors:** Ajay Kumar and Samir Droby

**Chapter 10: An overview of nanotechnology in plant disease management, food safety, and sustainable agriculture**

(**Andleeb Zehra**, Ashutosh Rai, Sushil Kumar Singh, Mohd. Aamir, Waqar Akhtar Ansari and R. S. Upadhyay)

ISBN: 978-0-12-821855-6, Elsevier Inc. 2020

**Book in Progress**

Prashant swapnil, Mukesh Meena, Harish Dr., Avinash Marwal, Selvakumar Vijayalakshmi, **Andleeb Zehra**. Plant microbe interaction-recent advances in molecular and biochemical approaches- Vol. I and II, Elsevier.

**Journal Reviewer**

**Frontiers in Microbiology**

**MDPI**