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Area of Specialization: Biofertilizer, Nanofertilizer, Groundwater Monitoring, Tissue culture and Transgenic,

#### EDUCATIONAL QUALIFICATIONS

DEGREE	YEAR OF PASSING	UNIVERSITY/INSTITUTE
Ph.D. (Biotechnology)	2008	Maharshi Dayanand University, Rohtak
PG (Biotechnology) M.Sc.	1999	Maharshi Dayanand University, Rohtak
PG (Education) M.Ed.	2010	Maharshi Dayanand University, Rohtak
UG (Medical Science) B.Sc.	1997	Maharshi Dayanand University, Rohtak
UG (Education) B.Ed.	2001	Maharshi Dayanand University, Rohtak
Diploma (PGDCA)	2002	Maharshi Dayanand University, Rohtak
CSIR-JRF	2002	CSIR, New Delhi

#### ACADEMIC STAFF COLLEGE ORIENTATION/REFRESHER COURSE/FDP ATTENDED

PROGRAM	DURATION	SPONSORING AGENCY AND PLACE
Online One Week Faculty Development Program "Research and Beyond"	9 <sup>th</sup> October to 14 <sup>th</sup> October, 2021	Hansraj Faculty Development Center, Hansraj College, the University of Delhi
Online One Week Faculty Development Program "E-Content Development"	06 <sup>th</sup> June , 2020, to June 12, 2020	SANATAN DHARMA COLLEGE Ambala Cantt., Haryana, In collaboration with Directorate of Higher Education, Haryana
IN-YAS-CUPB Lecture Workshop	31 <sup>st</sup> May and 5 <sup>th</sup> June 2020	Indian National Young Academy of Sciences and Department of Botany, Central University of Punjab, Bathinda
Faculty development Programs Soft skills and creative academic writing"	29 <sup>th</sup> July to 4 <sup>th</sup> August, 2019	Faculty Development Centre ,M. D. University, Rohtak
Refresher Course Environmental studies	1 <sup>st</sup> July 2016 to 22 <sup>nd</sup> July 2016	BPS Mahila Vishwavidyalaya Khanpur kalan
Refresher Course Environmental studies	18 <sup>th</sup> December 2014 to 7 <sup>th</sup> Jan. 2014	KU, Kurushetra
Orientation Program	3 <sup>rd</sup> May to 31 <sup>nd</sup> May 2012	Bhagat Phool Singh (BPS) Mahila Vishwavidyalaya Khanpur Kalan

COMMUNITY EVENT/ RADIO TALK: Radio Talks on "Recycle today for a better tomorrow "on All India Radio on 18<sup>th</sup> Nov. 2015.



#### Research Guidance:

##### 1. Ph.D.

Sr. No.	Name of the Scholar	Title of the Thesis	Awarded/ Submitted
1	Kavita Rani	Effect of fly ash on growth and development of mungbean( <i>Vigna radiata</i> ) and wheat( <i>Triticum aestivum</i> L)	Awarded
2	Alka Rao	Monitoring of arsenic in Rohtak district of Haryana	Pursuing
3	Shikha Kumari	Production and optimization of bioplastic from agro -residue	Pursuing
4	Jyoti	To explore the potential use of agricultural residues in paper manufacturing	Pursuing
5	Ankita Yadav	Comparative analysis of the antimicrobial and antioxidant activity of Ag-doped ZnO nanoparticles with conventional pesticides	Pursuing
6	Shweta	Potential of molybdenum nano fertilizer in enhancing Nitrogen Use Efficiency(NUE)	Pursuing

##### 2. Dissertation Guidance to M.Sc. Environmental Science and Environmental Biotechnology students: 50

#### PUBLICATIONS

#### BOOK CHAPTER

1. Singh RP, Dhanias G, Sharma A and Jaiwal PK (2006). Biotechnological Approaches to improve phytoremediation efficiency for environment contamination (Eds: Shree N. Singh and Rudra D. Tripathi). Environmental Bioremediation Technologies, Springer.pp. 223-258.ISBNn:3-540-34790-9.
2. Saini S and Dhanias G (2016). Biodegradation and Bioremediation of pesticides from contaminated sites. (Eds: Ram Naresh Bharargava and Gaurav Saxena).Bioremediation of Industrial pollutants, ISBN: 978-93-84649-60-9.
3. Dhanias G (2018). Climate Change and Agriculture.(Eds. Santosh Nandal) Climate Change and Environmental Degradation, Issue, Challenges and Policy Implications.pp.109- 114.BOOKS AECADE.(ISBN:13:978-93-86932-03-7.
4. Himanshi and Dhanias G(2019). Wastewater treatment using *Moringa oleifera* as a Natural coagulant (Eds: R. K. Behl, Machiavelli Singh, Achim Ibenthal, and Wolfgang Merbach). Emerging Technologies Toward Agriculture, Food and Environment, Agrobios(International).pp. 279-288.(ISBN:978-93-81191-22-4).
5. Nandal M and Dhanias G(2019).Enrichment of organic waste compost with microbial inoculants(Eds: R. K. Behl, Machiavelli Singh, Achim Ibenthal, and Wolfgang Merbach). Emerging Technologies Toward Agriculture, Food and Environment, Agrobios(International).pp. 299-306.(ISBN:978-93-81191-22-4).
6. Saini S and Dhanias G (2020). Cadmium as an Environmental Pollutant: Ecotoxicological Effects, Health Hazards, and Bioremediation Approaches for Its Detoxification from Contaminated Sites (Eds. Saxena, Gaurav, Bhargava, Ram Naresh). Bioremediation of Industrial Waste for Environmental Safety volume -II. (Volume II: Biological Agents and Methods for Industrial Waste Management).Springer Singapore. (978-981-13-3425-2).DOI: 10.1007/978-981-13-3426-9\_15 (eBook ISBN 978-981-13-3426-9). Pp. 357-387.
7. Shikha and Dhanias G (2020). Impact of climate change on food production in India. (Eds: Sanjay Kumar Singh and Uma Kant Singh). Current Global Environmental Scenario, Kanak Prakashan(978-93-89457-58-2) pp.121-133.

8. Saini S, Nandal M and Bahamnia GD (2020). Effective and sustainable solid waste management in India: A challenge. (Eds: Pankaj Kumar Arora). Microbial Technology for Health and Environment, Springer Nature Singapore (ISBN 978-981-15-2678-7) pp.267-287.
9. Rao Alka and Dhanial G (2021). Current status of E-waste in India: Issues and Impacts. (Eds: Navtika Singh Nautiyal and Shuchita Agarwal). Future of E-waste management: Challenges and Opportunities, Thomson Reuters South Asia Private Limited, Gurgaon. (ISBN-10: 9390529859 and ISBN-13: 978-9390529858). Pp. 146-158.
10. Kumari Shikha and Dhanial Geeta (2021). Environmental health and COVID-19. (Eds: Anbu Arumugam and Rajesh Mourya). COVID-19 Pandemic current status, Kripa Drishti Publication, Pune. (ISBN-978-93-90847-06-8), 4:13-21.
11. Kumari Shikha, Kataria Poonam, and Dhanial Geeta (2022). Wastewater treatment using biochar technology. (Eds: Riti Thapar Kapoor and Maulin P. Shah). Biochar : applications for bioremediation of contaminated systems, Walter de Gruyter GmbH, Berlin/Boston, CPI books GmbH, Leck (ISBN 978-3-11-073858-2; e-ISBN(PDF) 978-3-11-073400-3; e-ISBN(EPUB) 978-3-11-073406-5). Pp. 55-66.
12. Saini Sushila and Dhanial Geeta (2022). Ecological and health implications of heavy metal contamination in the environment and the bioremediation approaches. (Eds: Ram Naresh Bhargava, Sandhya Mishra, Ganesh Dattatraya Saratale, Rijuta Ganesh Saratale, Luiz Fernando Romanholo Ferreira). Bioremediation: Green Approaches for a Clean and Sustainable Environment, CRC Press, ISBN:1000574849; 9781000574845. page 189-206.
13. Geeta Dhanial (2022). Fly ash as an alternative to enhance the soil condition and plant growth. (Eds: Santosh P Mane, Dr. Praveen G. Saptarshi, Dr. S. D. Shinde, Dr. B. M. Bhanje, Dr. F. M. Nadaf, Dr. H. B. Tipe, Dr. Sandeep Rout, Muhammad Yasir, Dr. Babalola Ayodele Samuel, Dr. Kavitha G. N). "Sustainable Development for Society, Industrial Development, Material, Energy, and Environment: Key Issues, Opportunities, and Challenges", Jyotikiran Publications, Pune International Publication, ISBN: 978-81-953847-8-5, Volume -II, Page 21-23.
14. Shikha Kumari, Sushila Saini, Geeta Dhanial (2022). Biotechnological Approaches for Mitigation and Adaptation of Climate Change. (Eds: Anukool Vaishnav, S.S Arya, D K Choudhary). "Plant Stress Mitigators Action and Application", Springer Singapore, ISBN:978-981-16-7758-8, eBook ISBN: 978-981-16-7759-5, pp 369-385 (doi:10.1007/978-981-16-7759-5\_17). [https://link.springer.com/chapter/10.1007/978-981-16-7759-5\\_17](https://link.springer.com/chapter/10.1007/978-981-16-7759-5_17).
15. Alka Rao, Jitender Singh Laura and Geeta Dhanial (2023). Microalgae Biomass as a Sustainable Source for Biofuel. (Eds: Meenakshi Nandal, Pradeep khaliya and Geeta Dhanial). Environmental sustainability: Emerging concern and management, Indu publication, ISBN:978-93-91377-526.
16. Alka Rao, Jitender Singh Laura and Geeta Dhanial (2023). Agricultural Biomass: An Approach to Address the Energy Crisis and Environmental Pollution. (Eds: Meenakshi Nandal, Pradeep khaliya and Geeta Dhanial). Environmental sustainability: Emerging concern and management, Indu publication, ISBN:978-93-91377-526.
17. Shikha Kumari, Manjeet Kaur, Geeta Dhanial (2023). Production of Bioethanol from Lignocellulosic Agricultural Residue Production. (Eds: Meenakshi Nandal, Pradeep khaliya and Geeta Dhanial). Environmental sustainability: Emerging concern and management, Indu publication, ISBN:978-93-91377-526.
18. Shikha Kumari, Alka Rao, Manjeet Kaur, Geeta Dhanial (2023). Biodegradation of Pesticides Using Fungi: A Novel Approach. (Eds: Meenakshi Nandal, Pradeep khaliya and Geeta Dhanial). Environmental sustainability: Emerging concern and management, Indu publication, ISBN:978-93-91377-526.
19. Shikha Kumari, Manjeet Kaur, Geeta Dhanial (2023). Management of Plastic Waste: A Sustainable Approach. (Eds: Meenakshi Nandal, Pradeep khaliya and Geeta Dhanial). Environmental sustainability: Emerging concern and management, Indu publication, ISBN:978-93-91377-526.

20. Shikha Kumari, Manjeet Kaur, Geeta Dhaniala (2023). Carbon Nanomaterials for Wastewater Treatment. (Eds. Junaid Ahmad Malik and Mohamed Jaffer Sadiq M). Modern Nanotechnology: Environmental Sustainability and Remediation. Springer, ISBN (P): 978-3-031-31110-9; ISBN (E): 978-3-031-31111-6.
21. Ankita Yadav and Geeta Dhaniala (2023). Nanosorbents – A Nanotechnological Approach for the Treatment of Heavy Metal Contamination in Wastewater. (Eds. Junaid Ahmad Malik and Mohamed Jaffer Sadiq M). Modern Nanotechnology: Environmental Sustainability and Remediation. Springer, ISBN (P): 978-3-031-31110-9; ISBN (E): 978-3-031-31111-6. <https://link.springer.com/book/9783031311109>.
22. Shweta Alhan and Geeta Dhaniala (2023). Enhanced nitrogen use efficiency in plants by the application of molybdenum. (Eds. Mahesh Kumar). Integrating Science and Technology: A comprehensive approach to innovation. Notion press, ISBN-13: 979-8890661098, pp: 57-78.
23. Alka, Ankita Yadav and Geeta Dhaniala (2024). Postharvest management and shelf life of fresh produce. (Eds. Deepa Srivastava, Rajarshi Kumar Gaur and Ajay K. Tiwari). Plant diseases and their management: A sustainable approach, ISBN : 9781774916087. Apple Academic press. <https://www.appleacademicpress.com/plant-diseases-and-their-management-a-sustainable-approach/9781774916087>.
24. Alka Rao, Shikha Kumari, Jitender Singh Laura and Geeta Dhaniala (2023). Fertilizer and Pesticide industries. (Eds. Meenakshi Nandal, Geeta Dhaniala, Sushila Saini and Pradeep Khaliya). Handbook of Industrial Wastewater Treatment: Emerging Technologies for sustainability. ISBN: 978-93-93405-302, 2023. Publisher: Agri-Biovet Press, New Delhi.
25. Jyoti Dangi, Geeta Dhaniala, Meenakshi Nandal and Jitender Singh Laura (2023). Paper and Pulp Industries. (Eds. Meenakshi Nandal, Geeta Dhaniala, Sushila Saini and Pradeep Khaliya). Handbook of Industrial Wastewater Treatment: Emerging Technologies for sustainability. ISBN: 978-93-93405-302, 2023. Publisher: Agri-Biovet Press, New Delhi.
26. Shikha Kumari, Alka Rao, Manjeet Kaur, Geeta Dhaniala (2023). Petrochemical Industries. (Eds. Meenakshi Nandal, Geeta Dhaniala, Sushila Saini and Pradeep Khaliya). Handbook of Industrial Wastewater Treatment: Emerging Technologies for sustainability. ISBN: 978-93-93405-302, 2023. Publisher: Agri-Biovet Press, New Delhi.
27. Shweta Alhan, Sushila Saini and Geeta Dhaniala (2023). Dye and Textile industries. (Eds. Meenakshi Nandal, Geeta Dhaniala, Sushila Saini and Pradeep Khaliya). Handbook of Industrial Wastewater Treatment: Emerging Technologies for sustainability. ISBN: 978-93-93405-302, 2023. Publisher: Agri-Biovet Press, New Delhi.
28. Ankita Yadav and Geeta Dhaniala (2023). Iron and Steel Industries. (Eds. Meenakshi Nandal, Geeta Dhaniala, Sushila Saini and Pradeep Khaliya). Handbook of Industrial Wastewater Treatment: Emerging Technologies for sustainability. ISBN: 978-93-93405-302, 2023. Publisher: Agri-Biovet Press, New Delhi.
29. Pallavi Dhingra and Geeta Dhaniala (2023). Characterization and Advanced wastewater treatment technology of Pharmaceutical industry: A review (Eds. Srujana . M. G, Dr. Manuj Awasthi, Dr. Neelam Agrawal Srivastava, K. Lakshmi, Manjunatha G, Dr. Vikram P Hiremath, Dr. Jyoti Dharmendra Mashale). Research in Multidisciplinary subjects (Volume -4) page no. 61-66, ISBN: 9788196477622, The hill publication, Purulia, West Bengal, August 2023.
30. Ankita Yadav, Geeta Dhaniala (2023). Biosurfactants as Versatile Molecules for Sustainable Development. (Eds. Shantaram G. Baviskar, Manisha S. Pawar). Natural Sciences and Environmental Awareness towards Sustainable Development. Page No. 123-131. ISBN: 978 -81 -959050 - 4 - 1, Fern International Publication Pune, 20/10/2023.
31. Alka Rao, Jitender Singh Laura, Geeta Dhaniala (2024). Water conservation for environmental sustainability. (Eds. Mohammad Hadi Dehghani, Rama Rao Karri, Inderjeet Tyagi, Miklas Scholz). Water, the Environment and the Sustainable Development Goals. Page No. 85-106, ISBN: 978-0-443-15354-9, 2024. Publishers: Elsevier, <https://doi.org/10.1016/B978-0-443-15354-9.00012-8>

32. Ankita Yadav and Geeta Dhanial(2024). A comprehensive review of artificial intelligence application in different fields(Eds Rana Pratap Singh).KAHAAR: A multilingual magazine for common people.Page No. 45–,ISSN(p):2394–3912,2024(Jan–March).Publishers: Professor H.S. Shrivastav Foundation for Science and Society, Lucknow([www.phssfoundation.org](http://www.phssfoundation.org)).
33. Tripti Rathee, Kimi Sindhu, Shikha Kumari, and Geeta Dhanial(2024). Application of Biochar from Marine Algae for Treatment of Emerging Contaminants.(Eds.Riti Thapur Kapoor, Mohd Rafatullah and Norli Ismail)Marine biomass: Biorefinery, Bioproducts and Environmental bioremediation.Page No. 389–402.,ISBN:9783111353586. WalterdeGruyterGmbH,Berlin/Boston.<https://www.degruyter.com/document/doi/10.1515/9783111353951/html#contents>.
34. Ankita Yadav,Shweta Alhan and Geeta Dhanial (2024).Nanobiostimulants for Enhancing Plant Growth and Yield.(Eds. Vandana Singh,Rouf Ahmad Bhat and Gowhar Hamid Dar ) Nanostimulants: emerging strategies for agricultural sustainability.Page No. 111–134.,e Book ISBN:978–3–031–68138–7.Springer Cham,Switzerland AG 2024. 11th November,2024DOI: [10.1007/978–3–031–68138–7\\_6](https://doi.org/10.1007/978-3-031-68138-7_6).
35. Shweta Alhan ,Ankita Yadav and Geeta Dhanial (2024).Nanostimulants and sustainable crop production..(Eds. Vandana Singh,Rouf Ahmad Bhat and Gowhar Hamid Dar ) Nanostimulants: emerging strategies for agricultural sustainability.Page No. 303–323.,e Book ISBN:978–3–031–68138–7.Springer Cham,Switzerland AG 2024. 11th November,2024, DOI: [10.1007/978–3–031–68138–7\\_13](https://doi.org/10.1007/978-3-031-68138-7_13).
36. Ankita Yadav and Geeta Dhanial(2024).Nanotechnology:Application in various areas of food industry.(Eds. Satyavir Singh,Anju,Vanita Kumari Sapra) Sustianable food future:Organic farming and food processing,M/S University Press house Pvt.Ltd,ISBN:978–81–19793–45–7.163–180.

## BOOK

1. Environmental sustainability: Emerging concern and management (Eds. Meenakshi Nandal, Pradeep khaliya, and Geeta Dhanial) ISBN:978–93–91377–526,2022.Publisher: Indu Book Services Pvt. Ltd., New Delhi.
2. Handbook of Industrial Wastewater Treatment: Emerging Technologies for sustainability(Eds. Meenakshi Nandal, Geeta Dhanial, Sushila Saini and Pradeep khaliya) ISBN:978–93–93405–302,2023.Publisher: Agri-biovet Press, New Delhi

## RESEARCH PAPER

1. Ankita Yadav,Pallavi Dhingra,Alka Rao and Geeta Dhanial(2024). Effect of Zinc oxide nanoparticles on growth and germination of Mungbean seeds(*Vigna radiata* L),Asian Journal of Chemistry,36:12(2885–2890).(<http://doi.org/10.14233/ajchem.2024.32709>.ISSN: 0975–427X (Online) | ISSN: 0970–7077 (Print).
2. Alka Rao, Shikha Kumari, Geeta Dhanial, Jitender Singh Laura (2024) Fertilizers and pesticides are polluting the environment with arsenic: a case study ,Environment Conservation Journal, ISSN (Print) 0972–3099 ISSN (online) 2278–5124.
3. Alka Rao, Shikha Kumari, Jitender Singh Laura and Geeta Dhanial(2024).Assessment of Arsenic and Physicochemical Properties of Soil Around Municipal Waste Dumpsite at Rohtak, Haryana, India.Oriental Journal of Chemistry,40(4):1040,ISSN No. 0970 – 020X.
4. Alka Rao, Shikha Kumari, Jitender Singh Laura and Geeta Dhanial(2023).Qualitative phytochemical screening of medicinal plants using different solvent extracts.Oriental Journal of Chemistry,39(3):621–626: (DOI: [10.13005/ojc/390312](https://doi.org/10.13005/ojc/390312), ISSN No. 0970 – 020X
5. Kumari Shikha,Rao Alka,Kaur Manjeet and Dhanial G(2023).Petroleum Based Plastic Versus Bio-Based Plastic: A review.Nature Environment and Pollution Technology,22(3)pp:1111–1124;p-ISSN: 0972–6268;e-ISSN: 2395–3454 ,DOI: [10.46488/NEPT.2023.v22i03.003](https://doi.org/10.46488/NEPT.2023.v22i03.003).

6. Khyalia P, Dangi J, Barapatre S, Dhanias G, Laura JS, Nandal M. (2022). Comparative Analysis of Compost Quality Produced from Fungal Consortia and Rice Straw by Varying C/N Ratio and its Effect on Germination of *Vigna radiata*. Nature Environment and Pollution Technology, 21(3): p-ISSN: 0972-6268 ;e-ISSN: 2395-3454; doi.org/10.46488/NEPT.2022.v21i03.029. [https://neptjournal.com/upload-images/\(29\)B-3873.pdf](https://neptjournal.com/upload-images/(29)B-3873.pdf)
7. Alka Rao, Khushbhu Rajput and Geeta Dhanias (2021). A Comparative Study On Production Of Bio-Ethanol From Aquatic Weed. International Journal of Advance and Applied Research (IJAAR), ISSN - 2347-7075. 1(5):104-115.
8. Mittal A, Manpreet M, Sunil S, Dhanias G. Antimicrobial and Antioxidant Activity of Five Medicinal Plants Against Different Microbes. Biosci Biotech Res Asia 2021;18(4). ISSN:0973-1245.
9. Rani K and Dhanias G (2021). Effect of fly ash and biofertilizers on mungbean growth (*Vigna radiata*). Wesleyan Journal of Research. 14(1):131-139.
10. Rani K and Dhanias G (2020). Exploring the ability of fly-ash to improve the soil quality of barren land in Rohtak, Haryana. Wesleyan Journal of Research. 13(4):43-50. (ISSN:0975-1386).
11. Bahamnia GD and Mittal A (2019). Standardization of in vitro indirect shoot regeneration protocol for Indian mustard, *Brassica juncea* (L) using cytokinin Thidiazuron as an inducer. Journal of Emerging Technologies and Innovative Research. 6(6):370-377 (ISSN:2349-5162).
12. Dhanias G and Singh RP (2016). Standardization of *in vitro* shoot regeneration protocol for Indian mustard, *Brassica juncea* (L) using cytokinin, BAP as inducer. Biological Insights. 1:5-12. (ISSN:2456-7604).
13. Nandal M, Hooda R and Dhanias G (2014). Tea waste as a sorbent for removal of heavy metals from wastewater. International Journal of Current Engineering and Technology. 4 (1):243-247. (E-ISSN 2277-4106, P-ISSN 2347-5161). Impact factor: 2.52.
14. Rani K and Dhanias G (2014). Bioremediation and Biodegradation of pesticide from contaminated soil and water-A Novel Approach. International Journal of Current Microbiology and Applied Sciences. 3 (10): 23-33. (ISSN: 2319-7706).
15. Dhanias G and Rani K (2014). Impact of urbanization on groundwater pollution-An Emerging Problem. Journal of International Academic Research for Multidisciplinary. 2 (9): 123-133. (ISSN: 2320-5083) Impact Factor: 1.625.

#### IN PROCEEDING

1. Kumar A and Dhanias G (2013). "Biofertilizer in organic farming-A review "One-day National seminar on "Promising Trends in Science Galaxy PTSG-2013" organized by Deptt. Of Zoology, M. D. University, Rohtak on 20<sup>th</sup> March 2013. pages 116-129. (ISBN: 978-81-920945-3-3).
2. Dhanias G (2014). New strategy: Removal of arsenic from contaminated soil and water. One-day National Seminar on "Next-generation sciences: Vision 2020 and Beyond" organized by Deptt. Of Zoology, M. D. University, Rohtak on 8<sup>th</sup> March 2014. Page 136-143. ISBN: 978-81-920945-4-0.
3. Dhanias G (2015). Nanobiotechnology: An emerging technique in the medical field" one-day National seminar on innovative research in life science. Organized by Deptt. Of Zoology, M. D. University, Rohtak on 21<sup>st</sup> February, 2015. Page 37-41. (ISBN: 978-81-920945-5-7).
4. Yadav N and Dhanias G (2018). Study the combined effect of biofertilizer and fly ash on mungbean growth. Proceedings of the twentieth National symposium on Environment (NSE-20) on Challenges in Energy Resource Management and Climate Change" organized by Discipline of Earth Sciences, Indian Institute of Technology Gandhinagar, Gujarat on 13<sup>th</sup>-15<sup>th</sup> December, 2018. Page 299-300.

## DEVELOPMENT OF E-CONTENT FOR EPG-PATHSHALA

### MODULE AND EBOOK CHAPTER

1. Filter media selection ,(<https://ebooks.inflibnet.ac.in/esp09/chapter/filter-media-selection/>).Chapter 4.
2. Adsorption and adsorption-based sampling, (<https://ebooks.inflibnet.ac.in/esp09/chapter/adsorption-and-adsorption-based-sampling/>).Chapter 5.
3. Adsorbents, PSA, adsorption cycle, rotary bed/fluidized bed. (<https://ebooks.inflibnet.ac.in/esp09/chapter/adsorbents-psa-adsorption-cycle-rotary-bed-fluidized-bed/>).Chapter 7.
4. Flue Gas Analyzer Principle for Monitoring CO<sub>x</sub>, NO<sub>x</sub>, SO<sub>x</sub>, hydrocarbons, (<https://ebooks.inflibnet.ac.in/esp09/chapter/flue-gas-analyzer-principle-for-monitoring-cox-nox-sox-hydrocarbons/>).Chapter 6

Links: <https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=0Xvq9yUM2ILDrJ07FvIArQ==>

### PARTICIPATION IN CONFERENCES/SEMINARS WITH PRESENTATION

1. A paper entitled "Biomedical waste and its management "in one day international Conference on solid waste management: Development Strategies for sustainable Environment by DAV centenary college Faridabad on 19<sup>th</sup> April, 2024.
2. A paper entitled "Nanotechnology: application in various areas of the food industry" in one-day multidisciplinary international conference on " A sustainable food future: organic farming and food processing by the Department of Economic and Chemistry, Goswami Ganesh Dutt Santan Dharam College, Palwal on 3<sup>rd</sup> February 2024.
3. A paper entitled "A review on Minimising Water evaporation loss using chemicals" Science, Technology and Society: A Global Perspective (IESTSGP-2023) organised by Shahajiraje Mahavidyalaya, Khatav & Department of Botany ,Chemistry, Mathematics ,Physics, Geography and Internal Quality Assurance Cell (IQAC), Shivaji University, Kolhapur on 28<sup>th</sup> December, 2023.
4. A paper entitled "Applicability of Nano-fertilizers in Agriculture Sector: A sustainable Approach" in a day National conference on "PROMOTING IPR IN UNIVERSITY SYSTEM organized by the Centre for IPR Studies in Collaboration with Department of Zoology M.D. University, Rohtak on 3<sup>rd</sup> June, 2023
5. A paper on "The Himalayan Glaciers: A water food Energy Nexus Perspective for South Asia" in two day National Conference on OZONE LAYER, ITS DEPLETION AND IMPACT ON LIVING BEINGS (ODIL 2022) organised by National Environmental Science Academy, New Delhi, *In collaboration with* ICAR-National Research Centre on Camel, Bikaner (Rajasthan), Vidya Bhawan Rural Institute, Udaipur (Rajasthan) India | CAZRI Regional Research Station, Bikaner (Rajasthan), SKRAU, Bikaner (Rajasthan) | Dungar College, Bikaner (Rajasthan), Asian Biological Research Foundation (ABRF) Prayagraj, India | ISRS and PRSC, Ludhiana, Punjab on 16-17<sup>th</sup> September, 2022
6. A paper entitled " A Comparative study on the production of bioethanol from aquatic weed" in one-day multidisciplinary International e-conferences on Sustainable development goal in South Asia: Key issues, opportunities, and challenges. On 7<sup>th</sup> December 2021 organized by the University of Kelaniya, Sri Lanka, department of geography in collaboration with DBF Dayanand College of Arts and Science Solapur, (MS) India
7. A paper entitled " Bioleaching of heavy metals from sewage sludge: a Review" in two days virtual International Conference on " Emerging trends in applied sciences" held from 28<sup>th</sup> to 29<sup>th</sup> October, 2021 organized by Veer Narmad South Gujarat University, Surat, India and Vyatka State University, Kirov, Russia.
8. A paper entitled "Anti-microbial activity of medicinal plants: A review" in one day online 2nd Capacity Building National Webinar cum Workshop on "Ethics in Biomedical Research and GCP Guidelines" held on 15<sup>th</sup> March 2021 by the Department of Zoology and Human Ethics Committee, Maharshi Dayanand University, Rohtak.



9. A paper entitled "Microplastic in Environment: a Review" in two days online 5th International Conference on Bioenergy, Environment and Sustainable Technologies(BEST2021) and International E-Conference on Bioprospecting(ICONBIO) held on 29<sup>th</sup> to 30<sup>th</sup> January 2021 by Arunai Engineering College, Tiruvannamalai, Tamilnadu, India.
10. A paper entitled "Innate Immunity and COVID-19" in the Two Days Online International e-Conference (Under the Aegis of Department of Higher Education, Panchkula, Haryana) held on 29<sup>th</sup> & 30<sup>th</sup> June 2020, organized by the Department of Biotechnology, Government College for Girls, Sec-14, Gurugram, Haryana, India.
11. A paper on "Impact of COVID-19 Lockdown period in pollution reduction " in a one-day National webinar on "Environmental Perspective of COVID-19 " organized by Life Science Association and National scheme units of Sanatan dharma college, Ambala Cantt. On 5<sup>th</sup> June 2020. (Paper presented on 4<sup>th</sup> June).
12. A paper on "Impact of climate change on food production in India" two days Online International Webinar on "Current Environmental Global Scenario: Issues and Challenges"organised by the Department of Geography, RAJA HARPAL SINGH MAHAVIDYALAYA SINGRAMAU, JAUNPUR, U.P., and SHREE BALDEV P. G. COLLEGE BARAGAON, VARANASI, U. P. on 30 – 31 MAY 2020 .
13. A paper on the topic " COVID-19 and its psycho-social impact" in an International webinar on " Psychosocial and political impact of COVID-19 organized by the Department of Psychology and Political science, Gandhi Memorial National College Ambala Cantt on 29<sup>th</sup> May,2020.
14. Participated and presented a paper on "Toxicity of heavy metals reduction using Tea waste as an adsorbent" in the International conference on " Prospects of IPR in Innovative Practices" organized by IPR cell in collaboration with the Department of Pharmaceutical Science, M. D. University, Rohtak on 29<sup>th</sup> August 2019.
15. A paper on "Entomoremediation: In Situ soil decontamination approach" in the National Conference on " Recent development in basic sciences" organized by the Faculty of Sciences, Baba Mast Nath University, Asthal Bohar(Rohtak.
16. A paper on "Paver blocks formation using industry and plant waste material" in the National Seminar on " Frontiers in life sciences-an interdisciplinary perspective" organized by the Department of Zoology, M. D. University on 15<sup>th</sup> March 2019.
17. A paper on " Waste management using black soldiers flies" in a National seminar on innovative practices in farming organized by the Institutional Innovation Council, on 23<sup>rd</sup> February 2019 by M. D. University, Rohtak.
18. A paper on "Indoor bioaerosols–A Study" in the International Seminar on "One day International Seminar on "Sustainable Environment and Agriculture under global climate change" organized by Dep't. of Environmental Sciences, MD University in collaboration with SSARM (Society for Sustainable Agriculture and Resource Management on 21<sup>st</sup> February 2019.
19. A paper on "Treatment of municipal wastewater using natural coagulant" in International Conference on "Microbes for biotechnological innovations (MBI-2018) on 7<sup>th</sup> December 2018, organized by Department of microbiology and AMI-Rohtak unit Haryana.
20. A paper on " Removal of lead and chromium using tea waste as an adsorbent" in International Seminar on "Harnessing science and technology application through capacity building and economic policies for sustainable development" organized by the International Foundation for sustainable development in Africa and Asia(IFSDAA) Goettingen, Germany from 13-15<sup>th</sup> September 2018
21. A paper on "Effect of fly ash and biofertilizer on mungbean (*Vigna radiata*)" in the National Conference on "Technology and management options towards the use of fly ash in civil engineering, agriculture and environment" organized by Jagannath University, Bahadurgarh on 13-14<sup>th</sup> April 2018.
22. A paper on " Green chemistry and sustainable development" in the International Conference on "Sustainable agriculture, energy, environment and technology" organized by Environment sustainability management, MD University Rohtak on 24-25<sup>th</sup> Feb. 2018
23. A paper on " Effects of biofertilizer on physicochemical parameters of mungbean (*Vigna radiata*)" in an International conference on " Microbes for health and wealth" organized by the Department of Microbiology, M.D. University Rohtak on 14<sup>th</sup> November 2017
24. A paper on "Biotechnological methods in criminal investigation" at a one-day National Seminar on "Current Scenario in forensic investigative technique "organized by the Department of Genetics, M.D. University, Rohtak on 7<sup>th</sup> September 2017.
25. A paper on "Role of biotechnology in the conservation of environment and biodiversity" in a one-day National Seminar on "Biodiversity: Status and significance" organized by the Department of Botany, M.D. University Rohtak on 21<sup>st</sup> March 2017.

26. The paper "Climate change and agricultural" in a two-day National Seminar on "Climate change and agricultural: Impact and adaptation strategies in Haryana" organized by the Department of Economics on 6-7<sup>th</sup> February 2017 at M.D. University, Rohtak
27. A paper "Removal of heavy metals from the soil by using groundnut husk as an adsorbent" in one day National conference on "Genetic diversity and therapeutic potential of natural products organized by the Department of Genetics on 17<sup>th</sup> Sept. 2016
28. A paper "Microalgae: Important source of biofuel production" in one day National seminar on "Today's Vision: Save Ozone, Save Earth" organized by Deptt. Of Environmental Sciences, MD University in collaboration with Ministry of Earth Science Govt. of India. On 16<sup>th</sup> September 2015.
29. A paper "Nanobiotechnology-A novel Area in medical research" in one day National seminar on: Innovative Researches in life sciences "by Deptt. Of Zoology, MD University Rohtak on 21<sup>st</sup> Feb 2015.
30. A Paper "Effect of different rooting formulation on *in vitro* rooting in *Cicer arietinum* cv. Pusa -256" in one day conference on Pollution Mitigation for a sustainable future organized by Department of Environmental Science, MD University Rohtak on 26<sup>th</sup> March 2014.
31. A Paper "*Perilla frutescens*. A traditional crop for healthy diet" in Two-day National workshop on Genomics in crop improvement at Centre for Biotechnology, MDU Rohtak from Feb.27-28,2014.
32. A Paper "*Perilla frutescens*. A traditional crop for healthy diet" in Two day National workshop on Genomics in crop improvement at the Centre for Biotechnology, MDU Rohtak from Feb.27-28,2014.
33. A Paper "Solid waste management-a review" in One day National seminar cum workshop on "New Dimensions in Eco Management" on 25<sup>th</sup> February, 2014 at MCM DAV College for Women, sector 36-A Chandigarh (U.T.).
34. 54<sup>th</sup> Annual conferences of Association of Microbiologists of India (AMI), Platinum Jubilee Celebration, M.D. University, Rohtak, International Symposium on "Frontier and Innovations in Microbiology and its Interdisciplinary Relevance Organized by Department of Microbiology, M.D. University, Rohtak from November 17-20, 2013
35. International Geographical union conferences on "Geoinformatics for biodiversity and climate change" at Deptt. Of Geography, MD University Rohtak (Haryana), 14-16<sup>th</sup> March 2013.
36. Three day International Geographical Union (IGU) conference on "Geoinformatics for Biodiversity and Climate Change" organized by Department of Geography on 14-16<sup>th</sup> March 2013.
37. National Seminar on "Challenges in Combating Diseases: Cause to Cure" by Deptt. of Zoology, MD University, Rohtak on 23<sup>th</sup> March, 2012
38. 6<sup>th</sup> National conference on "Thermodynamics of chemical and biological systems" by Deptt. Of Chemistry, MD University, Rohtak on 2-4 November 2011
39. National seminar on Internet: Application in Research" at Department of Zoology MD University Rohtak, 26-27 March 2011.
40. National conference on Biodiversity: Challenges and Opportunities at Deptt. Of Botany, MD University Rohtak (Haryana), 18-19 Feb. 2011.
41. Conference on Resource development and Marketing Issues in Rapeseed-Mustard at Jaipur (Rajasthan), 28-29 March 2005.

#### ATTENDED CONFERENCE/WORKSHOP/SEMINAR

1. One day Workshop on "Development and Delivery of MOOCs" organised by Department of Journalism and Mass Communication under the aegis of Chaudhry Ranbir Singh Institute of Social and Economic Change on 17<sup>th</sup> November, 2022
2. One day Workshop on NAAC Documentation for UTDs organised by Internal Quality Assurance Cell, M.D. University, Rohtak on 14<sup>th</sup> November, 2022.
3. One day Workshop on Curriculum and Credit Framework for Undergraduate Programmes organised by Faculty Development Centre and Internal Quality Assurance Cell on 8<sup>th</sup> April, 2022.
4. National Workshop on Extramural Research Funding: Opportunities and Challenges organised by Scheme for Trans-disciplinary Research for India's Developing Economy (STRIDE), M.D. University, Rohtak sponsored by UGC New Delhi on 14-15<sup>th</sup> October, 2022.
5. Extension Lecture on Physical and Emotional Health care for busy professionals by Mr. Amar Singh Chandel on 24<sup>th</sup> July, 2024 organised by internal Quality Assurance Cell & FDC-MMTC, M.D. University Rohtak.
6. Basic First Aid training program held at Swaraj Sadan on 20<sup>th</sup> February, 2024 organised by Youth Red Cross, M.D. University Rohtak

7. Science Conclave-2023 held at M.D University Rohtak during 28-29th November,2023
8. One day National Seminar on "Future Universities" held at M.D. University ,Rohtak on 26th September,2023.
9. One day Workshop on NAAC Documentation for UTDs organized by Internal Quality Assurance Cell, M.D. University, Rohtak on 14th November, 2022.
10. One day Workshop on " Development and Delivery of MOOCs" organised by Department of Journalism and Mass Communication under the aegis of Chaudhry Ranbir Singh Institute of Social and Economic Change on 17<sup>th</sup> November,2022.
11. National Workshop on Extramural Research Funding: Opportunities and Challenges organized by Scheme for Trans-disciplinary Research for India's Developing Economy (STRIDE) ,M.D University,Rohtak sponsored by UGC new Delhi on 14-15th October,2022.
12. One day Workshop on Curriculum and Credit Framework for Undergraduate Programmes organised by Faculty Development Centre and Internal Quality Assurance Cell on 8th April,2022.
13. National webinar on " Satellite based technology on disaster monitoring and management" organised by Geography school of social science UP Rajarshi Tandon open University , Prayagraj India on 6th July 2021
14. one day National webinar On" The role of intellectual property rights in technology transfer" organised by Centre for IPR studies and Department of Microbiology, MDU Rohtak on 19th June,2021
15. Webinar on " Ecosystem Restoration for abatement of climate change" organised by Sri Venkateswara college, University of Delhi and Society for Environmental and Development (SED India),New Delhi on 5th June ,2021
16. 2<sup>nd</sup> Capacity building national webinar cum workshop on " Ethics in biomedical research and GCP guidelines" organised by Human Ethics committee and Department of Zoology,MDU,Rohtak on 15th March ,2021
17. Webinar on "Recent trends of space technology in Geographical Science " organised by Symbiosis Institute Geoinformatics from 1<sup>st</sup> and 2<sup>nd</sup> February,2021
18. Two days online International Webinar on "FRONTIERS IN BIOLOGICAL RESEARCH" organized by the Department of Zoology, Chaudhary Bansi Lal University Bhiwani, Haryana-127021 , held on 17th - 18th August,2020.
19. Two Day National Level Faculty Development Programme titled on 24th & 25th August 2020 organized by CMS, Jain (Deemed-to-be University).
20. A THREE DAY INTERNATIONAL RESEARCH CONCLAVE organized by CMS, Jain (Deemed-to-be University), Bengaluru on 3<sup>rd</sup> , 4<sup>th</sup> & 5<sup>th</sup> August 2020
21. Longitudinal immune profiling reveals distinct features of COVID-19 pathogenesis by Elizabeth Mann and Madhvi Menon on 31<sup>st</sup> July 2020 by IUIS
22. National Webinar on "Environment Around Us" on the Occasion of "Hariyali Mahotsav" jointly organized by Zoology & Biotechnology Department and Science Committee of Government Girls' P.G. College, Ujjain (M.P.) in Collaboration with Forest Department, Ujjain and Roopantaran Samajik Evam Jankalyan Sanstha, Ujjain (M.P.) on 20<sup>th</sup> July 2020.
23. National webinar on After effects of covid-19 on engineering education organized by Jan Nayak chaudhary devital,Memorial college of Engineering Sirsa, Haryana on 18<sup>th</sup> July,2020.
24. International webinar on "Covid-19 and beyond: Future prospects in biotechnology " organized by Department of Molecular and cellular engineering ,Jacob institute of biotechnology and bioengineering (JIBB) Sam Higginbottom University of Agriculture ,Technology and sciences on july 8-9<sup>th</sup> ,2020.
25. International Virtual Conference on modern instrumental and characterization techniques in applied science-2020(MICTAS-2020) organized by MIET Kumaon Haldwani and Department of chemistry,R.H. Govt. P.G. college Kashipur,Uttarakhand ,India on 5<sup>th</sup> to 6<sup>th</sup> July ,2020
26. Recombinant DNA Technology webinar series Conducted in May-June, 2020,organised by Merck High-End Skill Development Centre, a CSIR-IMTech Initiative (Ministry of Science & Technology, Govt. of India) Merck Innovation Lab Bangalore Chandigarh
27. International conference on "How to build up efficient Immunity against respiratory infections including Covid-19 issue organized by Kalindi College ,University of Delhi and University of Leipzig, Germany on 28<sup>th</sup> June,2020
28. TWO DAYS INTERNATIONAL WEBINAR ON GEOSPATIAL TECHNOLOGY & SUSTAINABLE ENVIRONMENT, organized by Department of Geography Faculty of Humanities & Social Sciences, IASE Deemed to be University, Sardarshahr, Churu. Rajasthan in collaboration with Swami Shraddhanand College. (University of Delhi) and Netra Institute of Geoinformatics Management & Technologies Foundation, Dwarka, New Delhi on 25<sup>th</sup> & 26<sup>th</sup> June. 2020.

29. International webinar on "Challenges in Agriculture and human health in emerging situation" organized by Indian society of genetics biotechnology research and development ,Agra (UP) on 22<sup>nd</sup> and 23<sup>rd</sup> June,2020
30. Webinar on SARS-CoV2: Origin, Pathogenesis and Management Strategies, organized by Department of Biochemistry, GGDSD(GOSWAMI GANESH DUTTA SD) College, Chandigarh on June 21, 2020.
31. Global Response to COVID19 organised by IIHS Sri Lanka on 20<sup>th</sup> June,2020
32. Webinar on "Pandemic Vis a vis Environment" organized by Gandhi Memorial National College, Ambala Cantt in collaboration with RIMT University, Mandi Gobindgarh on 18<sup>th</sup> June,2020.
33. National webinar on 'Role of agriculture and allied sciences towards global food security' jointly organized by Society of Biological Sciences and Rural Development, Prayagraj, Uttar Pradesh and Ram Sewak Singh Mahila College, Sitamarhi, Bihar during 13th-15th June, 2020
34. National Webinar On Mangrove diversity of Maharashtra Organized by Department of Botany of Dapoli Education Society's Dapoli Urban Bank Senior Science College, Dapoli-Ratnagiri (Maharashtra) on 2<sup>nd</sup> June,2020.
35. Webinar on "challenge and importance of e-waste management" organized by Department of Electronic and communication engineering, Sreenidhi Institute of Science and Technology,Hyderbad in association with IEEE product Safety Engineering,Society,India on 1<sup>st</sup> June 2020
36. Online international Symposium on topic" Role of plants as medicine and immunity booster with special reference to COVID-19 pandemic" organized by Shri Guru Tegh Bahadur Kalsa College Jabalpur,MP on 26<sup>th</sup> -27<sup>th</sup> May 2020.
37. Webinar on " Costa Rica: A Biodiversity Hotspot "organized by R.D. and S. H. National College and S. W.A. Science college, Bandra(W),Mumbai on 25th May,2020.
38. Webinar conference on Global Response to COVID-19 organized by International Institute of Health Sciences Sri Lanka, on 23<sup>rd</sup> May ,2020
39. Online Scientific Writing Program on the topics Structuring your manuscript to impress journal editors and Selecting a journal and preparing a great submission package organized by Editage on the 21st of May, 2020
40. Webinar on Molecular taxonomy and DNA Barcoding:Concepts ,methods and applications organized by Department of Botany under the aegis of IQAC,R.D. and S. H. National College and S. W. A. Science College,Bandra,Mumbai on 20<sup>th</sup> May,2020
41. Webinar on "Cybergogy for 21<sup>st</sup> century classrooms" organized under the aegis of Inter University centre for teacher education(IUCTE),Department of Education, The maharaja Sayajirao University of Baroda,Vadodara,Gujarat from 18<sup>th</sup> to 19<sup>th</sup> May 2020.
42. Webinar on "Man,animal conflict"organized by Nature Club RDNC under the aegis of IQAC.R.D. and S. H. National College and S. W.A. Science college,Bandra(W),Mumbai on 18<sup>th</sup> May,2020.
43. Webinar on "Sleep as an Immunity Booster" on 17th May 2020 organized by KIIT-Technology Business Incubator
44. One day National Level Faculty Development Programme on " MOOCs,E-Learning and E-Content in higher education" organized by the government first grade college for women ,Chamarajapet,Bangalore-560026,on 13<sup>th</sup> May,2020.
45. International webinar on"Plant-derived smoke compound as bio stimulants and their application in crops" organized by the Botany Department. KLE Society's Science & Commerce College Kalamoli, Navi Mumbai,India on 9<sup>th</sup> May 2020
46. Attended WEBINAR on topic "Covid-19 Pandemic and Immunity & Socio Psychological Issues and Covid-19, Organized by Department of Zoology, Deshbandhu College, University of Delhi & Delhi Pharmaceutical Sciences and Research University on 6th May 2020.
47. Webinar on "Implementation of protection of plant varieties and farmers right act in India" organized by Amity institute of biotechnology and amity institute of Integrative Sciences and Health on 2<sup>nd</sup> May, 2020.
48. Five day lecture series on " Reimaging education in the times of pandemics and beyond " organized by Dean academic affairs and director ,Ch. Ranbir Singh institute of Social and Economic Change ,M D University ,Rohtak from 26<sup>th</sup> to 30<sup>th</sup> April ,2020(Certificate pending)
49. One day National Seminar on Laboratory Animal Experimentation on 28<sup>th</sup> March 2019 organized by Center for Medical Biotechnology, M.D. University, Rohtak.
50. One day National workshop on Intellectual Property Rights: Protection,ownership and innovation,organized by Department of Education in Collaboration with IPR cell,M. D. University,Rohtak on 15<sup>th</sup> December,2018
51. One day National conference cum awareness programme on " Protection of Intellectual Property Rights- Need of the hour" by Department of Pharmaceutical Sciences. D. University,Rohtak on 10<sup>th</sup> May,2018

52. One day National conference –cum-workshop on “emerging infectious disease” organized by Centre for biotechnology, M. D. University, Rohtak on 29<sup>th</sup> November 2017.
53. One day International Conference on “ Microbes for Health and Wealth” organized by Department of Microbiology, D. University,Rohtak on 14<sup>th</sup> November,2017
54. One day National seminar on “Advance in virology” organized by Centre for medical biotechnology, M.D. University, Rohtak on 28<sup>th</sup> September 2017.
55. One day workshop on “Coping Health issues” on 23<sup>rd</sup> Feb 2017 organized by Women studies centre. D. University ,Rohtak
56. One day author workshop conducted by Vivekananda library in association with Elsevier on 18<sup>th</sup> November 2016.
57. One day workshop conducted by AISHE cell of MD University Rohtak on 20<sup>th</sup> November 2015.
58. 3<sup>rd</sup> International Research Colloquium on “Interdisciplinary scope of microbiology: Present status and future directions” in collaboration with AMI, Department of Microbiology on 31<sup>th</sup> Jan 2015.
59. One day workshop organized by Springer and MD University Rohtak on 25<sup>th</sup> Feb 2015.
60. One day Workshop on “Workplace Sexual Harassment of Women” on 24<sup>th</sup> January 2014 at Women's studies Centre MD University,Rohtak
61. One day Workshop on “University Level Disaster Management” organized by youth Red Cross , M.D. University,Rohtak in collaboration with National Disaster Management Authority, New Delhi, Indian Red Cross Society, Haryana State Branch Chandigarh and Haryana Institute of Public Administration ,Gurgaon. 28<sup>th</sup> December, 2013.
62. One day National seminar on “Promising Trends in Science Galaxy PTSG-2013” organized by Deptt. Of Zoology, M. D. University, Rohtak on 2<sup>0th</sup> March 2013.
63. One day International Research colloquium on “Advances in Microbial Biotechnology: Future Prospects (AMBF-2012)” organized by Department of Microbiology and Association of Microbiologists of India-Rohtak unit, on 20<sup>th</sup> November, 2012.
64. One day seminar on “Recent advancement in Application in Genetics organized by Deptt. of Genetics, MD University, Rohtak on 20<sup>th</sup> March 2012.
65. 2<sup>nd</sup> National seminar on Microbes in human welfare organized by Deptt. of Microbiologist , MD University, Rohtak in Association of Microbiologists of India-Rohtak unit on 24<sup>th</sup> March.
66. Two day National Workshop on “Current perspectives in Advance material science” by Pt. N. R. S. Govt College Rohtak,on 8-9<sup>th</sup> Feb.,2012
67. One day national seminar on “Microbes and Resource Management” by AMI( Association of microbiologists of India Rohtak-unit. On 22<sup>nd</sup> October 2011. MD University, Rohtak
68. One day national seminar on “Molecular Techniques-The face of Modern Science” by Deptt. Of Biochemistry, MD University, Rohtak on 24<sup>th</sup> October 2011
69. Seminar on “Intellectual Property-Creation and Protection” on 23<sup>rd</sup> April 2011 at Department of Microbiology, M.D. University, Rohtak
70. National symposium on issue and challenge for environmental management: vision 2025 at Lucknow (U.P), 17-19 Feb. 2006.
71. National symposium on Plant Biotechnology, New Frontiers at Lucknow (U. P.), 18-20, November 2005.
72. In National Symposium on medicinal plants farming, science and practice for improving financial status of Indian farmer's vision 21<sup>st</sup> century and herbal Trade fair /exhibition at Gorakhpur.26-27 June 2004
73. All India Council For Technical Education Sponsored Workshop on “Spectroscopic Techniques” on 5-6<sup>th</sup> August 2004 at N.C. College of Engineering Israna, Panipat (Haryana)
74. Patent Awareness Workshop on 21<sup>st</sup> December 2002 at Department of Bioscience, M.D. University, Rohtak
75. National Convention on Transgenic Rapeseed-Mustard at New Delhi, 16-17 Jan. 2002.
76. National Seminar on” Recent Advances in Environment and Biotechnology” on 5-6<sup>th</sup> December 2000 at Department of Bioscience, M.D. University, Rohtak

Awards and Distinctions: NCC 'B' certificate

Other Contributions:

Organizing Secretary

1. International ozone day on 16<sup>th</sup> September 2012 was celebrated by doing Declamation, Poster making and Quiz competition.
2. Celebration of Wetland day on 2<sup>nd</sup> Feb 2012 by doing March-past from gate no. 1 of M. D. University Rohatk to Tilyar Lake Rohtak.

3. 1<sup>st</sup> Feb. 2014 (as 2<sup>nd</sup> Feb.2014 is celebrated as World Wetland day) in Department by doing Poster and Declamation Competition (Interdepartmental) and Also March pass from Department.
4. One day National seminar on "Today's Vision: Save Ozone, Save Earth" organized by Deptt. Of Environmental Sciences, MD University in collaboration with Ministry of Earth Science Govt. of India. On 16<sup>th</sup> September 2015.
5. One day International Seminar on "Sustainable Environment and Agriculture under global climate change" organized by Dep't. Of Environmental Sciences, MD University in collaboration with SSARM (Society for Sustainable Agriculture and Resource Management on 21<sup>st</sup> February, 2019.
6. World Environment Day-2023 on 4<sup>th</sup> June,2022
7. Organization of World Sustainable Energy Day on 27<sup>th</sup> February, 2023.
8. Celebration of National Conference on "Science and technology for sustainable future on the occasion of National Science Day-2023 on 28<sup>th</sup> February, 2023.
9. World water day on 22<sup>nd</sup> March 2024
10. World Environment Day on 5<sup>th</sup> June 2024
11. World water day on 22<sup>nd</sup> March 2024
12. World Environment Day on 5<sup>th</sup> June 2024

#### Joint Secretary

1. National workshop on Microbial Diversity: Exploration and perspectives (3<sup>rd</sup> May -12<sup>th</sup> May 2012) organized by Department of Environmental Science.
2. One day conference on "Pollution Mitigation for a sustainable future" organized by Department of Environmental Science, MD University Rohtak on 26<sup>th</sup> March 2014.

#### Member organizing committee

1. International day for the preservation of Ozone layer on 16<sup>th</sup> September 2011
2. 28<sup>th</sup> Feb 2012, Science day was celebrated as Environmental awareness programme to aware the students to save water by celebrating Holi festival by flower, not by water. This message is send by performing musical skit by M. Sc. Students at Kishori college Rohtak
3. 22 March 2012, Water day celebration by doing Musical skit, Declamation, Poster making, Slogan writing competition.
4. 25<sup>th</sup> International ozone day on 16<sup>th</sup> September 2012 was celebrated by doing competition between interdepartmental and colleges student for Declamation, Poster making, Slogan writing competition.
5. 22<sup>nd</sup> March 2013 World water day celebration by doing Quiz competition.
6. Organization of Earth Day on 22nd April, 2022.
7. One week Workshop on Research Methodology held on 25th to 29th April,2022

#### Resource person/Chaired

1. Workshop on "Techniques in monitoring environmental pollution "organized by Department of Environmental Sciences, MDU ,Rohtak on 25<sup>th</sup> -26<sup>th</sup> October 2013.
2. Chaird a session Technical in Department of Education on 17<sup>th</sup> September (Two day interdisciplinary International Conference on 16-17<sup>th</sup> the September 2017).
3. Co-chair the session in one week workshop on " Research methodology in Life Sciences" from April 1-5,2021, on 3<sup>rd</sup> April 2021 organized by Department of Genetics, MD University, Rohtak

#### Judge

1. Contest held in Department of Genetics on the event of Teacher day celebration on 5<sup>th</sup> September 2013.
2. Judge in debate competition on 28<sup>th</sup> February 2017 at UIET Biotechnology
3. Slogan competition by zoology department on the occasion of National wildlife week, 7th october ,2024.

#### Educational Trip

1. Student Exchange Programme at Bengaluru North University Kolar from 18<sup>th</sup> January 2025 to 26<sup>th</sup> January 2025 (Kristu Jayanti College,SEA college,BNU Kolar,Mysore)
2. Dalhousie and khajjihar from 1<sup>st</sup> November to 6<sup>th</sup> November 2019.
3. Rampur, Sangla and Chitkul valley HP from 1<sup>st</sup> October 2017 to 6<sup>th</sup> October 2017.
4. Haridwar rishikesh mussoorie dehradun from 27<sup>th</sup> to 29<sup>th</sup> March 2012.

#### Field Visit

1. Visit to Amul Milk Plant (Sabar Dairy) as an incharge on 12<sup>th</sup> Feb, 2020.

2. Teacher incharge in one day educational trip to sanitary landfill site on 9<sup>th</sup> November 2024.
3. Teacher incharge on sabar dairy visit on 12th November 2024.

#### Life Membership

1. Life member of Association of Microbiologists of India from 22-7-2013.
2. Life member of PHSSFSS (Prof. HS Srivastava Foundation for sciences and society, from 6-2-2013.
3. Life member of "The Indian Science congress association" from 2018.(L36928 Membership number).
4. Member Society for sustainable agriculture and resource management (SSARM) from 2017.

#### Members in the following:

1. Admission committee in Ph.D./ award of URS on 19-10-2015 in Deptt. Of Environmental Sciences
2. Faculty of Life Sciences from 18-8-2015 to 18-8-2016 for one year.
3. Counselling committee for admission to various Life Sciences courses of M.Sc. Programme in session 2015-2016.
4. Appointed by the University -Member of anti ragging committee (2013-2014).
5. P.G board of studies for two years from 5.8.2013 to 5.8.2015.
6. Inspection committee of laminar air flow on 8<sup>th</sup> March 2016.
7. Admission committee in July 2017.
8. PG board of studies from period of 14.9.17 to 14.9.19.
9. Anti-Ragging committee for session 2017-2018.
10. Admission committee for PhD course work for the session 2017-2018.

#### University community Duty

1. Liaison officer during National youth festival organized in M. D. University from 12<sup>th</sup> to 16<sup>th</sup> January 2017.
2. Teacher in charge in Convocation held on 23<sup>rd</sup> April 2017 at Tagore auditorium.
3. Discipline committee in 37<sup>th</sup> Interzonal youth festival on 17-19<sup>th</sup> November 2017.
4. Member Hospitality committee in job fair organized by carrier counselling and placement cell on 4<sup>th</sup> may 2018 at activity centre, MDU ,Rohtak
5. Member committees for Institution Swachhta Ranking 2019 in "Canteen/Cafeteria Hygiene".
6. Members in "Attendance Compilation Committee" for Induction Programme from 19<sup>th</sup> to 24<sup>th</sup> August, 2019.
7. Member of inspection committee in RK College of Education ,Bhora Kalan ,Distt,Gurgaon on 7<sup>th</sup> November,2020.
8. Member of inspection committee in Saini College (Co-Ed ) on 20<sup>th</sup> October,2020
9. Duty of coordinators of Floral Drawing Contest on the theme " Blooming Trees" for Rang Bahar Utsav 2021 on 19th March 2021 at Rose garden, MDU, Rohtak
10. Member committee of result compilation and certificate writing committee in Rang Mahotsav-2020 organized by Dean students welfare held on 29th February to 6th March.
11. Duty coordinator in Rang Bahar 2022 in compost-making activity on 2<sup>nd</sup> March 2022.
12. Coordinator in university Youth fest 2021.22 to 24<sup>th</sup> December 2021
13. ONE NATION PARYAVARAN SANRAKSHAN GATIVIDHI 7<sup>th</sup> -9<sup>th</sup> January, 2022.
14. ONE NATION PARYAVARAN SANRAKSHAN GATIVIDHI 19<sup>th</sup> January,2022.
1. Member hospitality committee in musical program held on 23<sup>rd</sup> February,2022 at RK auditorium.
2. Member stage V in Tagore gallery in 40th Interzonal youth festival (UNIFEST-22) held from 25<sup>th</sup> to 27<sup>th</sup> March 2022.
15. Member Discipline committee in Rang Bahar 2023 held on 18th February2023.

#### Departmental Duty

1. Coordinator of Carrier and Counselling and Placement Cell, Department of Environmental sciences, M. D. University, Rohtak from 2012-2015.
2. Deptt. Coordinator IQAC for the session 2015-2016.
3. Seminar in charge in Oct. 2016 , 2017,2018,2019, 2020
4. Scheme and syllabus in charge in July-Sept. 2016
5. Member Treasurer in International conference held on 24-25<sup>th</sup> Feb. 2018 on: Sustainable agriculture, energy, environment and technology.
6. Polling officer in Election of class representative (CR) on 17-10-2018 in Deptt of Environmental Sciences
7. Member Sexual Harassment committee for the session 2018-2019.

8. Seminar and Alumni Incharge 2019-2020,2020-2021
9. Member Anti -Ragging Squads for the session 2019-20.
10. Constitute internal committee of female teacher to keep an eye over any mishappening with the female students 2019-20.
11. Time Table Incharge from May 2021.
12. Member Faculty of Life Sciences from 19-8-2021 to one year.
13. Constitute an internal committee of a female teacher to keep an eye over any mishappening with the female students 2021-2022.
14. Member of Admission committee 2022-2023 for Ph.D. Program
15. Organising Secretary in World Environment Day-2023 on 4th June,2022
16. Member Redressal Grievances committee for the session 2022-2023
17. Coordinator of criteria IV NAAC.
18. Member anti ragging committee for the session 2023-2024.
19. Member admission committee for the session 2022-2023.
20. Member Admission committee of PhD in the session 2024-2025.
21. Member PGOS from 27-5-2024 to two years.
22. Departmental In charge NAAC criteria V