

Dr. (Mrs) Monika Koul
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PROFESSIONAL PROFILE

Associate Professor, Department of Botany, Hansraj College with 16 years of teaching experience.

Accomplished career with consistent academic performance (distinction at higher secondary, senior secondary at M.Phil.) first class (Graduation and Masters) demonstrating consistent success as an Educator, and Researcher at the undergraduate and graduate education levels with areas of interest in Ecology, Environment Management and Plant Reproductive Biology. More than 16 years of experience at undergraduate level teaching Ecology, Environment Management and Reproductive Biology Courses and Visiting Faculty at SPA teaching Ecology Courses to Post-Graduate Students of Landscape Architecture. PI of two Research Projects with excellent Research Profile with 17 Research Papers, Two Books on Reproductive Biology and two lab manuals. Recipient of Ramasheshan Fellowship from Current Science Academy, Vice Chancellors Fellowship and Summer Research Fellowship from Indian Academy of Sciences. Delivered invited talks on variety of contemporary topics in the refresher courses conducted Academic Staff Colleges, INSPIRE DST Scheme for school students and IRIS platforms. Worked in close association with Vigyan Prasar, DST in capacity of resource person and expert for various science programmes. With strong flair for writing published semi-technical articles in Environment Newsletters, Science Magazines of CSIR and DST, and national and local newspapers to spread awareness on scientific and environmental issues. Took up administrative responsibilities of Teacher-in-charge, Coordinator of several staff council committees helped in striking collaborations of the college with National Institutes such as NII, TSSHI broadening the outreach activities. Serving NSS as a Programme Officer for many terms and steering the SPICMACAY and Environmental Awareness committee through commitment and innovative ways to involve students helped these societies carve a niche in University of Delhi and across the country. Consistent learner has attended various research workshops and training courses. Contributed to the syllabus revision at University of Delhi during FYUP, CBCS and LOCF based curriculum at undergraduate level. • Effective communicator, motivator with excellent at planning and execution of the assigned work. Conducted national conferences, seminars, workshops and FDPs, Passionate teacher ready to go beyond the syllabi driven classes. Enthusiastic botanist have been training students through DBT sponsored undergraduate research projects, field visits, colloquiums, Inter College Quiz Programmes and other co-scholastic activities. organizational, and negotiation strengths as well as the ability to lead, reach consensus, establish goals, and attain results.

EDUCATION

Ph. D. Botany, University of Delhi, 2004

Thesis Title: *Evaluation of Morphological, Ultrastructural and Biochemical Changes in Cyamopsis tetragonoloba (Linn.) Taub. In Relation to Cadmium Toxicity in Soil*

M. Phil. Botany, University of Delhi, 1999

Thesis Title: *Accumulation and Impact of Lead in Soil on Growth and Development of Cyamopsis tetragonoloba (Linn.) Taub.*

M.Sc. Botany, University of Delhi, 1998

Two term papers: Social Forestry and its impact in India
Ecological Adaptations

B.Sc. (Hons.) Botany, University of Delhi, 1996

ACADEMIC HONOURS

- Summer Research Fellowship (IASC, INSA, NASI) for IISC Bangalore 2018 (May to July, 2018).
- Selected for Vice Chancellors Fellowship, University of Delhi (2014).
- Ramaseshan Science Writing Fellowship, Current Science, Indian Academy of Sciences, Bangalore (August 2004 -July 2005)
- Senior Research Fellowship, Council for Scientific and Industrial Research, Government of India, New Delhi (2001 -2004).
- Junior Research Fellowship, Council for Scientific and Industrial Research, Government of India, New Delhi (1999 -2001).
- Topper M. Phil. Examination 1999-2000, Annual Examination, Department of Botany, University of Delhi (87.66%)
- Selected for award of scholarship J&K State Board of Secondary School Examinations (For securing 82.25% marks in the board examinations, 1991).
- School Topper in Class 10th Board Examination, conducted by J&K State Board of Secondary School Examination (Government Camp School, Muthi, Bantalab, Jammu)

ACADEMIC/TEACHING EXPERIENCE

Teaching: 16 yrs

Research: 20 Years

Associate Professor, Hansraj College, University of Delhi
(2014 till date)

Assistant Professor, Hansraj College, University of Delhi
(2005-2014)

Role: Teaching and Research

Visiting Faculty, Master of Landscape, School of Planning & Architecture, Delhi

(Since 2013)

Role: Teaching

Guest Faculty, M.Sc. Environmental Biology, University of Delhi

(Two Semesters-2010)

Role: Teaching

World Bank Indo- Kabul sponsored Project Teaching; University of Delhi

(Dec 2008 – March 2009)

Role: Teaching

Guest lecturer (old course) BSc. Botany, University of Delhi

(2007-08 to 2008-09)

Role: Teaching

Guest Lecturer, Miranda House, University of Delhi

(Jan 2004 – Mar 2004)

Role: Teaching

ADMINISTRATIVE ASSIGNMENTS UNDERTAKEN IN COLLEGE

Programme Officer NSS 2020-21

Coordinator Unnat Bharat Abhiyan, Coordinated by IIT Delhi 2021

Coordinator Practical Examination Science (2020-21)

Co-Convener College Grievance Committee (2019-21)

Liaison Officer (EWS related appointments 2020--)

Deputy Presiding Officer (Student Union Elections) 2019

Criterion VII NAAC, Convener Environment and Best Practices (2017-18)

Teacher-in-charge, Department of Botany, Hansraj College (2015-16)

Member NAAC Steering Committee 2017

Member College Governing Body (2016)

Programme Officer NSS (2009-13) (2019-till date)

Convener SPICMACAY (2009, 2010 2014, 2015)

Convener Environmental Awareness Committee (2015)

Superintendent University Examinations including NCWEB (15-16)

Coordinator SEC and AECC Evaluation in College (2016-2020)

Coordinator Environmental Studies Paper (2015 Onwards)

Coordinator Science Setu Programme NII and TSSHI Faridabad

ADMINISTRATIVE ASSIGNMENTS UNDERTAKEN (University of Delhi)

Member Admission Grievance Committee University of Delhi (2019-20)
Governing Body Member DU School, Maurice Nagar, DU 2019.
Convener Quest CSEC (Centre for Science Education and Communication) 2015-18.
Presiding Officer, Student Council Elections, Post Graduate Hostel For Women 2019.
Screening Committee Forms (Assistant Professor) Anthropology
Secretary DUBS, 2020

PUBLICATIONS

Research Papers

1. **Monika Koul**, Lebin Thomas and Kapudeep Karmakar 2021 Functional Aspects of Solanaceae Trichomes in Heavy Metal Detoxification. *Nordic Journal of Botany* Vol 59 (5) 10.1111/njb.03171 Scopus (IF: 0.73) Scopus/UGC
2. Adit, Arjun & **Koul, Monika** & Tandon, Rajesh. 2020. Twelve new additions in the orchid flora of Tripura, north-east India. Check List. 16. 17-25. 10.15560/16.1.17. (UGC Care listed) Scopus CiteScore 2019: [0.9](#)
3. Adit, Arjun & **Koul, Monika** & Tandon, Rajesh. 2019. New distribution records in the orchid flora of Tripura, India. *Journal of Threatened Taxa*. 11. 14876-14885. 10.11609/jott.4613.11.14.14876-14885. (UGC) Scopus (0.231)
4. **Monika Koul**, Pratibha Thakur, A. K. Bhatnagar 2018 Pollination limitation: A threat to biodiversity and food security. *Journal of Food, Agriculture and Environment*, Issue 2, Pages 76-80. DOI:10.1234/4.2018.5500. (0.30) Scopus (2017)
5. Netra Bhandhari and **Monika Koul** 2018. Looking at Neonicotinoid Insecticides: Environmental Perspective *International Journal of Plant and Environment* Vol. 4, No. 2, 97-101. (Peer Reviewed)
6. **Monika Koul** and A. K. Bhatnagar 2017 Changes in Leaf Epidermal Features of *Cyamopsis tetragonoloba* (L.) Taub. in Response to Lead in Soil Phytomorphology Vol 67 1and 2: 19-25 (UGC List). (0.62)

7. S Biswas, **M Koul**, AK Bhatnagar 2015. Effect of arsenic on trichome ultrastructure, essential oil yield and quality of *Ocimum basilicum* L. Medicinal Plant Research, Bioline Publishers, Canada Vol. 5, No. 6. 1-7. (Peer Reviewed)
8. Mandeep Kaur, Pamposh, and **Monika Koul**. 2013 Water quality and pollution status of Najafgarh Jheel (Delhi) in contemporary urban scenario. Asian Academic Research Journal of Multidisciplinary. Volume 1(10), pp 326-336(impact factor 0.365)
9. Biswas, S., **Koul, M.**, Bhatnagar, A. K. 2011. Effect of salt, drought and metal stress on essential oil yield and quality in plants. Natural Product Communications. Vol. 6. 1559-64. (Scopus) (0.46)
10. Koul, Monika 2013. DST's INSPIRE Camps need a fresh look. Current Science.105 (2):145-146. (Scopus)
11. Santosh Kumar Vats, Anjana Singh, Monika Koul* and Prem Lal Uniyal 2010. Study on the Metal Absorption by two Mosses in Delhi Region (India) Journal of American Science 2010; 6(3), 176-181. (Peer Reviewed)
12. Monika Koul and A.K. Bhatnagar 2010. Who will save the plants from the botanist? Current Science Vol. 99 No. 10. 1304. (0.756) Scopus
13. M. Koul* Bhatnagar A. K. 2007. Plant Reproductive Biology Crucial for Conservation. Current Science .92: 1207-1208. 89:243. (UGC) (0.756) (UGC/Scopus)
14. M. Koul* and Bhatnagar A. K. 2005. Phenology and climate change. Current Science, 89(2), 243-244. (UGC, Scopus) (0.756)
15. Koul*, M., Kapoor, R. and Luikham, N. 2001. Influence of lead in soil on mycorrhizal development and plant growth of *Cyamopsis tetragonoloba* (Linn.) Taub. Indian J. Exp. Biol. 39: 459- 463. (UGC/Scopus) (0.78)
16. Bhola, J., Venkateswaran, V. R., & Koul, M. (2020). Corona Epidemic in Indian context: Predictive Mathematical Modelling. medRxiv. (Med Archives)

Research Guidance

1. Co-supervisor Ph.D. : Arjun Adit (Department of Botany, University of Delhi .
2. Guided two students in the UGC Funded Major Research Project
3. Guided and trained 10 students under Innovation Project Scheme

4. Trained many students by undertaking several research projects under DBT Star College Programme and Special Paper Environment Management

Books

1. Tandon, R. Shivanna, K.R and **Koul Monika** 2020 *Reproductive Ecology of Flowering Plants: Patterns and Processes*. **Springer Nature**.
2. Rupam Kapoor, Inderdeep Kaur & **Monika Koul** 2015. Plant Reproductive Biology and Conservation **ISBN: 9789382332909 Pages: 496** IK Publishers, New Delhi, India.
3. **Monika Koul** “Fun with Botany” for school students at Vigyan Prasar, DST, Govt. of India. (A manual)

Chapters in Books

1. Tandon, R., **Koul, M.**, & Shivanna, K. R. (2020). Reproductive Ecology of Flowering Plants: An Introduction. In *Reproductive Ecology of Flowering Plants: Patterns and Processes* (pp. 1-24). Springer, Singapore.
2. Shivanna, K. R., Tandon, R., & **Koul, M.** (2020). ‘Global Pollinator Crisis’ and Its Impact on Crop Productivity and Sustenance of Plant Diversity. In *Reproductive Ecology of Flowering Plants: Patterns and Processes* (pp. 395-413). Springer, Singapore.
3. **Monika Koul**. 2016 Transport in Plants” in Book “Biology Programme S5. Eds. A Hutten, N Gandhi. P Arora and NS Singh. Khosla Publishing House. New Delhi. ISBN: 978-93-83996-88-9 pp157-178
4. Shivangi Upadhyay, **Monika Koul** and Rupam Kapoor 2015. Rhizosphere Microflora in Advocacy of Heavy Metal Tolerance in Plants In: Plant-Growth-Promoting Rhizobacteria (PGPR) and Medicinal Plants Soil Biology Volume 42, pp. 323-337. Springer Publications.
5. **Monika Koul** and Romila Rawat Bisht 2015. Reproductive Success of Angiosperms in Response to Climate: An Assessment. In: Rupam Kapoor, Inderdeep Kaur & **Monika Koul** Plant Reproductive Biology and Conservation **ISBN: 9789382332909 Pages: 496** IK Publishers, New Delhi, India.
6. **Koul, Monika** & Bhatnagar, A.K. 2012. Urban Forests: Species selection and biodiversity conservation: 259-270. In Diversity and Conservation of Plants and Traditional Knowledge (eds. S. Panda & C. Ghosh). Bishen Singh Mahendra Pal Singh, Dehra Dun.

7. **Monika Koul** and Bhatnagar, A.K. 2007. Toxicity and Accumulation of Heavy Metals in Aquatic Flowering Plants In Plant Diversity and Conservation Eds. A.K.Bhatnagar, J.S.Singh and V.P.Singh.
8. Bhatnagar A.K. and **Koul, M.** 2003 Impact of Climate Change on Medicinal Plants: An Assessment In: Assessment of Climate Change in India and Mitigation Policies (Eds.) S.K. Dash and Prakash Rao. 18-26. WWF, India. Pp. 262

E-Modules

1. Monika Koul and Shweta Subramaniam (Eds) 2017 Ethnobotany Manual Virtual Learning Environ., Inst. of Lifelong Learning, Univ. of Delhi, Delhi).
2. Monika Koul Cuticle and Epicuticular Wax.2016 E Lessons, Modular interface (Virtual Learning Environ., Inst. of Lifelong Learning, Univ. of Delhi, Delhi). ISSN 2349-154X.
3. E Quizzes in Environmental Sciences, Embryology and Phycology

Semi-Technical Articles

1. Monika Koul and Gaurav Kumar 2021 Disaster in Uttarakhand: A Warning and a Wake-up Call Science Reporter 58 (3) 10-13.
2. Gaurav Kumar, Arjun Adit and Monika Koul 2021. Simlipal Forest Fire. Reporter 58 (5) 13.
3. Debraj Manna and Monika Koul 2021. Understanding the ecological and economic implications of plastic usage. Dream 2047 Vol. 24 (5)14-15
4. Monika Koul and A. K. Bhatnagar 2021. Looking afresh at GM crops, the wait has been long enough. IndiaBioscience. 1-6 Jan 25, 2021
5. Monika Koul and Jyoti Bhola. 2020. Assessing the impact of lockdown on undergraduate teaching: A survey-based approach. Digital learning Magazine. <https://digitallearning.eletsonline.com/2020/05/assessing-the-impact-of-lockdown-on-Underdergraduate-teaching-a-survey-based-approach/>
6. Monika Koul and A.K. Bhatnagar2018. Novocrafters for Pollination. Science Reporter Vol 55
7. Monika Koul 2017 Biodiversity Parks- Restoring Degraded Environments. June 2017 SR Vol.54(6) 14-18.
8. Amit Moza and Monika Koul 2016 Bamboo. The Green Gold Science Reporter SR Vol.52 26-27.

9. Monika Koul 2015 Questioning in Science: Implications and Consequences Science Reporter SR Vol.52 26-27.
10. Monika Koul 2014. Water FootPrint: Time to Reduce the Impact. Science Reporter Vol 51 (6) 12-16.
11. Monika Koul 2014 Biological weapons: a real threat. Dream 2047, July 2014, Vol. 16 No. 10, 29-30.
12. Monika Koul. 2013. Research in Basic Sciences: Need for Fresh Outlook. Science Reporter Vol 50 (3)26-27.
13. Monika Koul 2013. Green Nanotechnology: Solution for Clean Drinking Water Dreamz. Vol 15(8)25-26.
14. Monika Koul, Shreyasee Biswas and Akanksha Madan 2012. Field trips and excursions: role in science education. The Botanica 59-61.
15. Koul, Monika & Bhatnagar, A.K. 2012. Can we add more value to our conferences/symposia? International Journal of Educational Planning and Administration, 2 (2): 107-109.
16. Monika Koul 2011. Urban Forests Fighting for Survival Science Reporter Vol 48 (6) 29-33.
17. Monika Koul 2010. Forest Fires and Biodiversity Loss. VIPNET NEWS Vol 8 No. 12.
18. Monika Koul* and A.K. Bhatnagar 2009. Looking afresh and urban greens. Environews, Vol 15 No. 3: 5-7.
19. Monika Koul* and A. K. Bhatnagar 2009. Species watch groups – key to biodiversity conservation Environews, Vol 15 No. 2: 5-7.
20. M. Koul*, M. 2005. Forsteronia refracata holds key to breast cancer research, Curr. Sci. 87: 1222.
21. Koul. M.2003. Guar: a multipurpose leguminous crop. The Botanica 53: 198-205.
22. Koul, M. 2001. Forests and ecological security. The Botanica. 51: 100-110.
23. Tomar, M.; Neelu; Koul, M. and Narang, S., 1998. Forest fires. The Botanica 48: 100-149.
24. Koul, M.; Johri, A. and Uniyal, P. L. 1997. Kalesar wildlife sanctuary: Unexplored wilderness. The Botanica 47: 114- 118.

Abstracts in International and National Conferences

1. Adit A., Phukela B., **Koul M.**, Tandon R. 2021. *In vitro* propagation and re-introduction of Blue Vanda in North-East India. Virtual World Orchid Conference, hosted by Taiwan Orchid Growers Association, Taiwan. (April 26-27, 2021).

2. Adit A., Koul M., Tandon R. 2021. Orchid conservation in an overlooked region of India. Virtual World Orchid Conference, hosted by Taiwan Orchid Growers Association, Taiwan. (April 26-27, 2021).
3. Adit, A., **Koul M.** and Tandon R. 2019. Deception and Reward in establishment of Specialized Interactions in Orchidaceae. Poster presented in National Conference cum Workshop on Recent advances in Orchidology with special emphasis on Biology, Climate change, Conservation and Commercialization of Floriculturally and Therapeutically important taxa. Port Blair, Andaman and Nicobar Islands, India.
4. Thakur Pratibha **and Monika Koul 2016.** Shrubs to contest air pollution levels in Delhi. National Seminar on Water and Air Quality in Urban Ecosystem" conducted by Ecoclub, Shivaji College, University of Delhi
5. **Monika Koul. 2016** 'Biosafety issues related to medicinal plants: Concerns and Challenges' National Conference of Stakeholders on "Agrotechnology, Commerce and Sustainable Use of Medicinal Plants for Equitable Healthcare" on 6 and 7 February 2016 at National Academy of Agricultural Sciences (NASC), New Delhi.
6. Nikita and **Monika Koul 2016.** **Heavy metal uptake and contamination in medicinal plants: Hype or Reality"** National Conference on "Plant Science Research: Looking Beyond 21st Century for Environmental and Agricultural Revolution Organized by Society of Plant Research (Vegetos) and Department of Botany, University of Delhi.
7. Bhatnagar, A.K., **Koul Monika** and Thakur Pratibha 2014. Pollination Limitation: A threat to biodiversity and Food Production. 3rd Global Congress on Plant reproductive Biology, conservation and Crop Improvement Organized by Society of Plant Reproductive Biologists, Agra, India. Pp 39
8. **Monika Koul & Jaswant Sokhi.** 2013. Bamboos and their role in environmental conservation. In National Seminar on Climate change, environment and sustainable development organized by National Environment Science Academy, New Delhi India and Department of Botany, Jamia Hamdard, New Delhi, India. 9-10 December, 2013, Jamia Hamdard, New Delhi pp 35.
9. Bhatnagar, A.K. & **Koul, Monika.** 2012. Urban Green spaces : Ecological and Economic Evaluation. In Ist Biennial International Congress on Urban Green Spaces organized by Center for Urban Green Spaces, Aravali Foundation for Education, Department of Environment, Govt. of NCT, Delhi: 51-52 (Abstract), March 5-7, 2012.

(Gave an oral presentation in the conference) at India International Centre, Max Muller Marg, Lodhi Estate, New Delhi.

10. Biswas Shreyasee, **Koul Monika** & Bhatnagar, A. K. 2011. Effect of Arsenic in soil on trichome ultrastructure, essential oil yield and antioxidative properties of *O. basilicum* L. In 3rd International Congress on Aromatic and Medicinal Plants organized by Universita degli Studi di Cagliari Dipartimento di Scienze Chimiche Cittadella Universitaria, Cagliari, Italy (Abstract), April 13-15.
11. **Monika Koul** and A.K. Bhatnagar 2010. Root cortical cells sequester maximum cadmium in *Cyamopsis tetragonoloba* as revealed by X-ray microanalysis. In: Fourth International Conference on Plants and Environmental Pollution (ICPEP-2), Lucknow, India, December 8-11, 2010.
12. **Monika Koul** and A.K. Bhatnagar 2010. Estimation and localization of cadmium in endosperm/gum in *Cyamopsis tetragonoloba* (L.) Taub. In An International Conference on Challenging and Emerging Dimensions in Medicinal/Herbal Plants and their Products: A Global Perspective: 26-28 November 2010; Chennai Trade Centre, Chennai, India.
13. Shreyasee Biswas, **Monika Koul** and A.K. Bhatnagar 2010. Arsenic in soil affects yield and quality of essential oil in *Ocimum basilicum* L. In An International Conference on Challenging and Emerging Dimensions in Medicinal/Herbal Plants and their Products: A Global Perspective: 26-28 November 2010; Chennai Trade Centre, Chennai, India.
14. Gitila Laisram, **Monika Koul** and A.K. Bhatnagar. 2009. Water Chestnut (*Trapa bispinosa Roxb.*) has a strong anti-oxidative defense system to combat arsenic stress. In: National Seminar on Exploration Utilization and Strategy Action Plan for Sustainable Management of Plant Resources (Feb 27-28, 2009), in University of Guwhati, India.
15. **Koul, M.** 2008 “Bioterrorism – the terror at our door-step” in the orientation course Organized by CPDHE and ILLL, University of Delhi 6th May to 3rd June, 2008.
16. **Koul, M.**, Sourav S. Deo. and Bhatnagar, A. K. 2007. Educational and recreational value of wetland ecosystems: an appraisal In National Conference of Wetlands, Science and Society – An assessment of their integration held at Indian National Science Academy INSA, New Delhi, December 11-13, 2007.
17. Singh, D., **Koul, M.** and Bhatnagar, A.K. 2006. Phenological monitoring (first flowering data) of some important tree species in

- Delhi in response to increasing temperature trends. In: National Conference on Biodiversity related International Conventions: Role of Indian scientific community organised by Delhi University Botanical Society at INSA. March 8-10. pp 116.
18. **Koul, M.**, Mehra, N. C. and Bhatnagar, A. K. 2004. Leaf epidermal features and epicuticular wax of *Grevillea robusta* (Silk Oak) leaves as indicator of automobile pollution. In: XXVII Annual Meeting of EMSI and Conference on Electron Microscopy and Allied Fields, EMSI and NPL, New Delhi, India. April 1-3. 250-251.
 19. **Koul, M.** and Bhatnagar, A. K. 2004. Assessment of edible gum/edible endosperm from *Cyamopsis tetragonoloba* (Linn.) Taub. For lead toxicity in soil. In: IUPAC International Conference on Biodiversity and Natural Products: Chemistry and Medical Applications, New Delhi, India. January 26-31, 2004.
 20. **Koul, M.** and Bhatnagar, A. K. 2002. Effect of lead in soil on leaf epidermal features of *Cyamopsis tetragonoloba* (Linn.) Taub. In: Second International Conference on Plants and Environmental Pollution (ICPEP-2), Lucknow, India, February 4-9, 2002.
 21. Misra, A., **Koul, M.** and Bhatnagar, A. K. 2002. Accumulation and effect of cadmium in soil on *Brassica juncea* (Linn.) Czern. & Coss. var. Varuna. In: Second International Conference on Plants and Environmental Pollution (ICPEP-2), Lucknow, India, February 4-9, 2002.
 22. **Koul, M.** and Misra, A. 2001. Impact of pollution on Indian plant diversity. In: Golden Jubilee Symposium on "Biotechnological Innovations in Conservation and Analysis of Plant Diversity" (February 7-9, 2001), Indian National Science Academy, New Delhi.
 23. Bhatnagar, A. K. and **Koul, M.** 2001. Botanical studies and Homoeopathic medicine - An assessment of their integration. In: Seminar for Developing an Interaction between CCRH and Homoeopathic Pharmaceutical Industry, New Delhi, September 27-28, 2001.
 24. **Koul, M.**; Neelu and Bhatnagar, A. K. 2000. Accumulation and impact of lead in soil on growth and development of *Cyamopsis tetragonoloba* (Linn.) Taub. In: National Seminar on Plant Physiology at Interface of Agri-Horticulture and Industry Agricultural University, Udaipur, December 30, 1999- January 1, 2000.
 25. **Koul, M.**; Sharma, S. and Sahoo, D. 1998. Seaweed cultivation in Indian Coast. In: National Symposium on Sustainable Aquaculture February 20-21, 1998, organised jointly by University of Delhi and Society for Indian

Articles (Ramaseshan Fellow) Current Science

1. M.Koul 2006 Genetically Modified Foods and their Biosafety Aspects, Curr. Sci.,
2. M.Koul 2006 New Developments in Rapessed Mustard, Curr. Sci., 90:1174-75.
3. M. Koul, M. 2005. Need for science writing course at college and university level. Curr. Sci.
4. M. Koul, M. 2005 Collaborations to improve biotech industry in India. Curr. Sci. 88: 1216.
5. M. Koul, M. 2005. Boralug Award for S. Nagarajan. Curr. Sci. 88:1025.
6. M. Koul, M. 2004 Luring women back to Science, DST's Women Scientist Scheme
7. M. Koul, M. 2004 New head for DRDO
8. M. Koul, M. 2004 New INSA President

Projects

1. Major Research Project Evaluation and analysis of four medicinal plants for their pollution load in wild, cultivated, and controlled conditions and response of their bioactive constituents in terms of yield and quality Rs. 9.81 lakhs UGC MHRD
2. Summer Project Two Months Studies on anti-bacterial effect of beet root extract on *Salmonella typhimurium* at Department of Cell Biology and Molecular Biology, Indian Academy of Sciences, Bangalore (Under SRF Scheme)
3. Innovation project 2015-16 HRC 311: "Study of germicidal properties of fumes generated in Havan (Yagya) in order to assess potentiality of havan in curing some infectious and air borne diseases" funded by University of Delhi, Delhi.
4. Rufford Grant 2018-19 awarded to Arjun Adit, University of Delhi (Team Member) by Ruffords Small Grants for Conservation

OTHER ACADEMIC ACTIVITIES

Certificate Courses (MOOCS Attended)

1. Sustainable Development in the 21st Century with Ban Ki-moon an online non-credit course authorized by Yonsei University and offered through Coursera (7 Week Course)

2. Time Management for Personal & Professional Productivity an online non-credit course authorized by University of California, Irvine and offered through Coursera 4week course.
3. Act on Climate: Steps to Individual, Community, and Political Action University of Michigan offered through Coursera (6 weeks)
4. Ecology: Ecosystem Dynamics & Conservation American Museum of Natural History Verify at coursera.org/verify/AZ8DTRUR197V (6 weeks)

Orientation/Refresher/FD Training Programs

1. Attended 5 Day FDP on Science Leadership Programme, Young Academy of Science and Central University Bhatinda.
2. Faculty Development Program on “Environmental Impacts of Covid-19 Pandemic: Challenges and Future Research” organized by University School of Environment Management, Guru Gobind Singh Indraprastha University, Delhi, from 27th May- 1st June, 2020. (on-line).
3. Two-week FDP Challenges before Academia in the Era of Gadgets, E-Communication and AI Mahatma Hansraj Faculty Development Centre, Under PMMMNMTT, MHRD, Government of India. December 15 to 28, 2018.
4. Attended FACULTY TRAINING PROGRAM IN RESEARCH PROJECT MANAGEMENT: Proposal to Publication and beyond (FTP-RPM) workshop to be held on 19th July 2016.
5. Attended and participated in UGC-ASC (UGC sponsored Refresher Course in Life Sciences for 3-weeks December 9 to December 30, 2014 conducted by CPDHE, University of Delhi.
6. Attended and participated in UGC-ASC (UGC sponsored Refresher Course) Research Methodology for 3-weeks December 10 to December 31, 2011 conducted by CPDHE and ILL, University of Delhi.
7. Attended and participated in UGC-ASC (UGC sponsored Orientation Course) for 4-weeks May 6 to June 3, 2008 conducted by CPDHE and ILL, University of Delhi

Workshops

1. Attended one-week Science Leadership Workshop supported by Science Academies and Conducted by Central University Bhatinda, June 22 to June 28, 2020. (on-line).
2. Workshop/Seminar on Role of Technical Terminology in higher Education, 23-24th July 2015 organized by commission for Scientific

- and Technical Terminology, Ministry of Human Resource Development, held at Hans Raj College, University of Delhi.
3. Attended a 2day workshop Reproductive Biology organized by ILLL, University of Delhi and Dayal Singh College, University of Delhi 17-18th March 2015.
 4. Attended the Academic Congress held at University of Delhi.
 5. Attended a one-day workshop on Environment Management held in Department of Botany, University of Delhi, Delhi – 110007, 8th August, 2012.
 6. Attended a 10-day Workshop entitled “Developing Champions of ICT Capacity Building in DU”, organized by ILLL (University of Delhi) and Microsoft Corporation from 14th September-25th September, 2009
 7. Attended a four-day Workshop for Question Bank Preparation entitled, “Development of online quizzes in Life Sciences” April 2009 at the Institute of Lifelong Learning, University of Delhi
 8. Attended Workshop on Revised Practical Syllabus for Biology Laboratory Course for B.Sc. Programme 1st Year from September 2-4, 2008 organized jointly by Institute of Lifelong Learning (ILLL) and Daulat Ram College, University of Delhi.
 9. Participated in the Workshop on Taxonomy, Reproductive Biology and Conservation (Sponsored by MoEF, Government of India) and organized by Centre for Environmental Management of Degraded Ecosystems, University of Delhi 18th – 27th February. 2009.
 10. Attended a Workshop on Content Creation in E-learning organized by School of Open Learning, University of Delhi, South Campus.
 11. Attended a Workshop entitled, “Biotechnology for Environmental Protection and Sustainable Development”, organized by Ministry of Environment and Forests, Government of India in cooperation with Department of Environment, Government of Canada. (February 5-6, 2003).
 12. Attended a workshop entitled “Integration of sustainable development in higher education, A TERI University initiative to discuss the role of universities as agents of transformation,” 19th January 2010 held at TERI University Campus, Vasant Kunj

Webinars/Online Workshops

1. Education 4.0 Paradigm Shift in Hybrid Learning. Jove India Webinar June 11,2020

2. Attended a webinar Symbol of Knowledge Dr RajenderSinghji, Organized by Savitri Bhai Phule University, Pune under UBA Scheme. June 11, 2020.
3. Webinar on Basic Documentation for Teachers organized by Paramarsh and IQAC Hansraj College, University of Delhi on June 22, 2020.
4. Attended the international webinar on research writing & publishing organised by AuthorCafé, International Webinar on the 7th, 8th, and 9th of July, 2020.
5. Webinar on Role of ICC and Prevention, Prohibition and Redressal of Sexual Harassment of Workmen at Workplace organized by Internal Complaints Committee, Hansraj College, University of Delhi on May, 22, 2020.
6. Webinar on Plant Biology: A Journey from Earth to Space organized by Department of Botany, Ramjas College, University of Delhi on May 22-23, 2020.
7. International Webinar on Biodiversity and Environmental Health organized by Department of Environmental Studies, Shivaji College, University of Delhi on May 20, 2020.
8. Webinar on Medicinal Plant: Eternal Source of Health and Wellness organized by Department of Botany, Swami Shraddhanand College, University of Delhi on June 17, 2020.
9. National Webinar on Biodiversity and Man organized by Department of Botany, Dyal Singh College in collaboration with Society of Ecological Research and Natural Resource Management on June 5, 2020
10. Webinar Series/Workshops under Project Paramarsh "Basic Documentation For Teachers" held on 22 June, 2020
11. Webinar Series entitled "NAAC's Assessment Criteria for Accreditation" held on 08th– 14th June, 2020
12. Webinar Series entitled "Quality Assurance in Higher Education: Practices and Issues" held on 4th– 8th May, 2020.
13. National Seminar on Genetically Modified and Transgenic Food crops. November 26-27, 2002 Organized by Delhi University Botanical Society, University of Delhi, Delhi - 110007

Conferences/Symposia

- Chaired a session and member for Panel Discussion on Science Popularisation in vernacular languages organized by Vigyan Prasar and co-hosted by Maulana Azad Urdu University, Hyderabad.

- Attended the Academic Congress organized by University of Delhi, Delhi-110007
- Attended a National Conference on Orchids organized by Orchid Society of India and Himalayan Resource Centre for Conservation of Biodiversity at Almora, Uttarakhand March 2010.
- Attended Higher Education Summit 2011, Organized by Digital Learning on 5th February, at Claridges, New Delhi.
- Attended a seminar on Effect of Radiations.
- Attended an international conference on “Climate Change: Business Sustainability and Society” organized by ASSOCHAM, 11-12th November, 2008, held at India Habitat Centre Lodhi Road.
- Attended Seminar on “Recent Trends in Botany”, organized by organized by Delhi University Botanical Society, University of Delhi, 16-17th February, 2007
- Attended National Seminar on “Biodiversity Related International Conventions: Role of Indian Scientific Community” organized by Delhi University Botanical Society, University of Delhi, March 8-10, 2006 held at INSA, Delhi.
- Attended National Seminar on "Relevance of Botany in Conservation and Improvement of Plants” February 8-9, 2006 organized by Delhi University Botanical Society at University Convention Centre, University of Delhi.
- Attended on day symposium on “New developments in Rapeseed Mustard”, Organized Jointly by DUBS and MRPC at University Convention Centre, University of Delhi.
- Attended Conference on “Resource Development and Marketing Issues in Rapeseed-Mustard, March 28-29, 2005 Organized jointly by MRPC and NAFED at National Institute of Agricultural Marketing Jaipur, Rajasthan, India.
- Attended National Seminar on “Genetically Modified Organisms – Biosafety Aspects” March 10-11, 2005 Indian National Science Academy (INSA), New Delhi Organized by Delhi University Botanical Society, University of Delhi, Delhi - 110007.
- Attended National Seminar on Climate Change in India and its Impact on Plant Diversity and Productivity. December 22-23, 2003, Organized by Delhi University Botanical Society, University of Delhi, Delhi - 110007.
- National Seminar on Genetically Modified and Transgenic Food crops. November 26-27, 2002 Organized by Delhi University Botanical Society, University of Delhi, Delhi - 110007.

- Attended National Convention on "Transgenic Rapeseed-Mustard - An Assessment" organized by Mustard Research & Promotion Consortium (January 16- 17, 2002), India International Centre, New Delhi.
- Attended Indian Science Congress, 88th session organized jointly by Indian Science Congress Association and Indian Agricultural Research Institute (IARI), (January 3- 7, 2001), IARI, New Delhi.
- Attended a Symposium, "Wildlife Conservation in Urban Environment", October 6, 2000 organized by Ministry of Environment and Forest, New Delhi.
- Participated in National Convention on Rapeseed -"Mustard at the Doorstep of the New Millennium" organized jointly by Mustard Research & Promotion Consortium, Eco-Transformation Centre and Food Research & Analysis Centre, (March 24-25, 2000), New Delhi.
- National Seminar on Plant Physiology at Interface of Agri-Horticulture and Industry. 30th December 1999 -1st January 2000.
- Participated in Conference on "Mustard Oil Crises, Why, How and What Next" organized jointly by Mustard Research & Promotion Consortium and Eco-Transformation Centre, (April 21, 1999), New Delhi.
- International Seminar on "Indian Ocean in the 21st Century Linkages and Networking" Vigyan Bhavan, (February 9-10), 1998, New Delhi.
- Attended a panel discussion on Protection of Girl Child organized at Vigyan Bhavan, New Delhi, 23rd January, 2010 representing Hans Raj College NSS Unit.
- National Orchid Show & Symposium on "Orchid Research, Production, and Marketing Strategies" at CSIR Centre, New Delhi (November 8-10, 2002). The Orchid Society of India (TOSI), Department of Botany, Panjab University, Chandigarh.
- Golden Jubilee Symposium on "Biotechnological Innovations in Conservation and Analysis of Plant Diversity" at India International Science Academy, New Delhi (February 7-9, 2001). Delhi University Botanical Society, Department of Botany, University of Delhi.
- National Convention on "Rapeseed - Mustard at the Doorstep of the New Millennium" (March 24-25, 2000). Mustard Research and Promotion Consortium, Eco-Transformation Centre and Food Research and Analysis Centre. New Delhi.
- National Convention on "Mustard Oil Crises, Why, How and What Next" at India International Science Academy, New Delhi (April 21,

1999). Mustard Research & Promotion Consortium, New Delhi and Eco-Transformation Centre, New Delhi.

AWARDS AND RECOGNITION

- Best Poster Presentation Award to the Innovation Project HRC 311 by Research Council, University of Delhi
- Best Poster Presentation Award for the co-authored paper entitled “Arsenic in soil affects yield and quality of essential oil in *Ocimum basilicum* L.”, In An International Conference on Challenging and Emerging Dimensions in Medicinal/Herbal Plants and their Products: A Global Perspective: 26-28 November 2010; Chennai Trade Centre, Chennai, India
- Won DUBS Best Article Award 2003, for the young scientist/ student below 30 years of age.
- Won First Prize for on-the-Spot Essay Writing Competition organized by the Delhi University Botanical Society, 2003.
- Awarded First Prize for the Best Poster presentation in Second International Conference on Plants and Environmental Pollution (ICPEP-2), Lucknow, India, February 4-9, 2002.
- Awarded First Prize for the Best Poster presentation in Poster competition organized by Delhi University Botanical Society (1999).
- Awarded Second Prize in Biological Quiz, Annual Flower Show organized by Delhi University Botanical Society (1998).
- Won Third Prize for On-the-Spot Essay competition organized by the Botanical Society, Deshbandhu College, University of Delhi (1995).
- Awarded Second Prize for Flower Arrangement competition organized by the Botanical Society, Deshbandhu College, University of Delhi (1993-1994).
- Awarded First Prize for On-the-Spot Essay competition organized by the Botanical Society, Deshbandhu College, University of Delhi (1993).
- Awarded First Prize in the Intra College Botanical Quiz competition organized by the Botanical Society, Deshbandhu College, University of Delhi (1993).

POPULAR ARTICLES

- Together we can, Greater Kashmir June 5, 2021.

- <https://www.greaterkashmir.com/news/opinion/kashmir-wetlands-need-for-fresh-look-from-health-perspective/>
- <https://www.greaterkashmir.com/news/opinion/promotions-how-long-the-wait/>
- <https://www.greaterkashmir.com/news/opinion/a-new-way-forward/>
August 10, 2020
- <https://www.greaterkashmir.com/news/opinion/time-to-remember/>
- <https://www.greaterkashmir.com/news/opinion/reinventing-teaching-learning-during-a-pandemic-a-perspective/>
- <https://www.greaterkashmir.com/news/opinion/plant-sciences-opening-new-avenues-to-students/>
- Science for sustainable development *Daily Excelsior* 28/02/2018
<https://www.dailyexcelsior.com/science-for-sustainable-development/>
- Rendezvous with nature 5th June 2017
www.dailyexcelsior.com/rendezvous-with-nature
- They are bold indeed. 14 March 2017.
<https://www.dailyexcelsior.com/they-are-bold-indeed/>
- Conserve soil 5th December, 2106. *Daily Excelsior*
<https://www.dailyexcelsior.com/conservesoil/>
- Pesticides in food August 11, 2016 *Daily Excelsior*
<https://www.dailyexcelsior.com/pesticides-in-food/>
- *Remembering Eminent Women Scientists*
www.dailyexcelsior.com/remembering-eminent-women-scientists
(March 8, 2016)
- Spread Awareness and raise Curiosity 28 Feb, 2016
- Science for Nation Building 28-2-15.
<https://www.dailyexcelsior.com/science-for-nation-building/>
- Celebrating scientific temper
<http://www.dailyexcelsior.com/celebrating-scientific-temper/> 28-2-1014
- Raising Environmental Awareness 5th June, 2014.
<https://www.dailyexcelsior.com/raising-environmental-awareness/>
- Celebration wild-life-eek <http://www.dailyexcelsior.com/celebrating-wildlife-week/> 6-10-2014
- Welcome Kudankulum <http://www.dailyexcelsior.com/welcome-udankulum/> 19/7/2013
- Wake up to the fire <http://www.dailyexcelsior.com/wake-up-to-the-fire/> 5th June 2013
- A wonder herb, *The Times of India*, Supplement, April 15, 2005.

- A carrot a day..... The Times of India, Supplement, December 10, 2004.
- A menace called cocaine, The Times of India, Supplement, November 26, 2004
- What's cooking? The Times of India, Supplement, October 8, 2004.
- Beauty and what cost. The Times of India, Supplement June 6, 2004
- Obituray Dr. T. N. Khoshoo. The Botanica Vol 52, 2002.
- An Anti-carcinogenic Cooking Medium. The Pioneer, December 23, 2001.
- The Terror at Our Doorstep. The Indian Express, October 24,2001.
- Human Cloning is Okay. The Indian Express, October 3, 2001.
- Getting the Hang of Biosafety. The Indian Express, July 27, 2001.
- Story of Cocaine Plant. The Pioneer, July 17, 2001.
- Blue-Print for Delhi's Survival. The Pioneer, September 3, 2000.
- BotPouri. The Botanical News The Botanica (2000-2005)

BOOK REVIEWS

- Monika Koul 2017 Life in Himalayas M.K.Pandit, Harvard Press. Current Science
- **Monika Koul 2013. Indian Herbs for Touch Therapy, Tattooing and Adornments 2013.** S.K. Sood, Vipula Sharma, T.N. Lakhanpal Romita Sharma and Suresh Kumar Astral International Pvt. Ltd., New Delhi, pp 316. Botanica.
- **Monika Koul. Towards Conservation and Management of Mangrove Ecosystems in India 2013.** Eds. Bhatt J.R, Macintosh D.J., Nayar T.S.m Pandey C.N. and B.P. Nilratna, IUCN (International Union for Conservation of Nature and Natural Resources. India pp278. Botanica.
- **Sacred Plants for Sustenance of Mankind 2013.** S.K.Sood, Suresh Kumar and T.N. Lakhanpal. Astral International Pvt. Ltd., New Delhi, pp 625 Price 2295 ISBN 978-81-7035-810-7.
- **Koul, M.** 2012. Comprehensive Practical Plant Physiology. S. L. Kochhar and Sukhbir Kaur Gujral. McMillan Publishers, India Ltd. Pp 532. The *The Botanica* pp. 174.
- **Koul Moza, M.** 2006 An Introduction to Biodiversity, First edition, Pritpal Singh, Anne Books, The Botanica Vol 56.
- **Koul Moza, M.** 2006 The Text Book of Plant Physiology, V. Verma, Anne Books The Botanica Vol 56.

- **Koul, M.** 2004. Plant Biotechnology: laboratory Manual for Plant Biotechnology, H.S.Chawla, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi, India, The Botanica 54 pp. 302.
- **Koul, M.** 2004. More Folk Tales of Science by Dilip M. Salwi, Rupa Publishers, Delhi, India, The Botanica 54, pp. 186.
- **Koul, M.** 2003. Science in Indian Media - a Blueprint for the New Millenium Dilip M. Salwi, Rupa Publishers, Delhi, India, The Botanica 53, pp. 174.
- **Koul, M.** 2002. Knowledge workers of CSIR - Team CSIR Team CSIR (Human resource Development group, CSIR, New Delhi. pp. 625.
- **Koul, M.** 2002. Health and dietary aspects of mustard oil. (Eds.) A. K. Bhatnagar, H. B. Singh and Shyam Prakash. Mustard research Promotion Consortium, New Delhi. pp. 158.
- **Koul, M.** 2001.Plant embryology - Past Present Future. Ed. Roman Czapik, Polish academy of Science. pp. 244.
- **Koul, M.** 2001. A Little About Scientists and Inventors All Should Know Science by Dilip M. Salwi, Rupa Publishers, Delhi, India, The Botanica 51, pp. 86.
- **Koul, M.** 2001.Senior Scientists of CSIR - Team CSIR (Human resource Development group, CSIR, New Delhi. pp. 337.
- **Koul, M.** 2001. Joy of Bird Watching. Vishwa Mohan Tiwari. National Book Trust, A-5 Green Park, New Delhi - 110016. pp. 287.
- **Koul, M.** 2000. Folk Tales of Science by Dilip M. Salwi, Rupa Publishers, Delhi, India, The Botanica 50, pp. 180.

MEMBERSHIPS

Societies

- Life Member International Society of Plant Morphologists ISPM, Delhi
- Member Asian Academy of Sciences (2018)
- Life Member Indian Botanical Society IBS, Lucknow.
- Life Member International Society of Environmental Botanists, ISEB, Lucknow.
- Life Member Delhi University Botanical Society DUBS
- Member SEC, IRIS, DST, Government of India
- Member of the Scientific Expert Committee of weekly science news programme, “Science this week”, telecasted on Lok Sabha TV, every

Friday, produced by Vigyan Prasar, Government of India with Credence Media, Delhi. 21/2/2011

Organizing/Seminars/Workshops/ Management Committees

- Organized two-day National e-Conference Botany: Scope, Opportunities and Challenges, January 15th and 16th 2021 Mahatma Hansraj Faculty Development Centre, Under PMMMNMNTT, MHRD, Government of India.
- Organized one day Conference on Draft NEP Convener National Seminar on Draft New Education Policy, 2019, August 10, 2019 under Mahatma Hansraj Faculty Development Centre, Under PMMMNMNTT, MHRD, Government of India.
- Organized a Workshop on “Microbial Biotechnology” under the DBT Star College Scheme in 2013
- Member Organizing Committee National Seminar “Relevance of Nanotechnology to Biology”, on 1st March, 2013, held at Hans Raj College, University of Delhi, Delhi – 110007.
- Member of organizing committee in the INSPIRE Internship Program – 2012, December 17-21, 2012
- Member Organizing Committee NSS Youth Festival organized jointly by Delhi University in December, 2010 at Arts Faculty Delhi University.
- Served as a member of College Annual Function Committee for two consecutive years 2006-08, 2009-12, 2013-14.
- Served as a member of Election Committee (2006-07, 2007-08 and 2008-09, 2009-10, 2010-11)
- Served as a member of Anti-ragging Committee for the years 2006-07, 2007-08 and 2008-09.
- Organizing Committee member for National Seminar on Climate Change in India and its Impact on Plant Diversity and Productivity. December 22-23, 2003, Organized by Delhi University Botanical Society, University of Delhi, Delhi - 110007.

Curriculum Development and Syllabus Revision

- Member Courses Committee 2016-18 Department of Botany, University of Delhi
- Resource Person, NCERT Project on Teaching Aids in Biology. Involved in Developing Herbal Garden Manual
- Core Group Member of the Committee of Courses for ES111 (Environmental Science)
- for B.Sc. Programme.

- Contributed material for on-line quizzes for ILLL website.
- Member of the Courses Committee for B.Sc. Life Sciences 3rd Year Paper (Ecology and Environment Management LS 303. Committee member for the **Foundation course- Environment and public health** in University of Delhi in 2014.

Invited Talks/Lectures (Recent Invited Talks Only)

1. Delivered a talk on Women Role in Conservation, Shyama Prasad Mukhrejee College, Ecoclub.
2. Delivered a talk on Women and Biodiversity: A perspective, Sarojini Naidu Centre for Women Studies, Jamia Millia Islamia University Oct 1, 2020
3. ‘Factors affecting plant growth and pollutant mitigation ability’, Gandhi Peace Foundation, New Delhi (02/03/2020). Organised by School of Planning and Architecture and ENVIS, New Delhi
4. ‘Biotechnological developments – Surrogacy, GMO & Cloning’. Biology and career options from school to higher studies (10/09/2020)
5. ‘Sustainable development & biodiversity: tribal rights *vis-a-vis* forests. Refresher course on human rights & social inclusion. Jamia Millia Islamia (14/09/2020).
6. Delivered a Talk on “Bioterrorism: Understanding and Its Implications Institute of Forensics” Science & Criminology Panjab University, Chandigarh 19th March 2019.
7. Talk on “Bio & career options from school to Higher studies workshop for PGT Biology of Army public school teachers, Faculty Development & Research Centre on 18th July 2019.
8. Talk on “Robotics in Plant Science and Agriculture” Science Fusion Programme, Vigyan Prasar, Government of India on 21 May 2019
9. Talk on Factors affecting plant growth and pollutant mitigation ability Green Skill Development Programme PA-ENVIS GSDP on 2nd March 2020.
10. Talk GSDP Course: Valuation of Ecosystem Services and Green GDP ‘Vegetation Sampling’ on 21st Jan 2020.
11. Delivered a talk on Science Projects for School Students CBSE Workshop, CBSE Schools at
12. Suncity School Gurugram workshop 17Jan 2020