



Faculty Details proforma for DU Web-site

Title	Dr.	First Name	Suman	Last Name	Lakhanpaul	Photograph																				
Designation		Professor																								
Address		EG-119,UGF, Inder Puri, New Delhi-110012																								
Phone No Office																										
Residence		011-25833341																								
Mobile		9868375756																								
Email		Sumanlp2001@yahoo.com																								
Web-Page																										
Educational Qualifications																										
Degree	Institution				Year																					
Ph.D.	Delhi University				1989																					
M.Phil. / M.Tech.	Delhi University				1983																					
PG	Delhi University				1981																					
UG	Delhi University				1979																					
Any other qualification																										
Career Profile																										
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Delhi University, Botany Department</td> <td style="width: 20%;">Professor</td> <td style="width: 15%;">2006-Till date</td> <td style="width: 35%;">Teaching and Research</td> </tr> <tr> <td>Delhi University, Botany Department</td> <td>Reader</td> <td>2002-2005</td> <td>Teaching and research</td> </tr> <tr> <td>NRC on DNA Fingerprinting, NBPGR, Pusa Campus, New Delhi-110012</td> <td>Senior Scientist</td> <td>1998-2002</td> <td>Teaching and research</td> </tr> <tr> <td>National Bureau of Plant Genetic Resources, Pusa Campus, New Delhi-110012</td> <td>Scientist (Senior scale)</td> <td>1992-1998</td> <td>Research</td> </tr> <tr> <td>National Bureau of Plant Genetic Resources, Pusa Campus, New Delhi-110012</td> <td>Scientist S-1</td> <td>1987-1992</td> <td>Research</td> </tr> </table>							Delhi University, Botany Department	Professor	2006-Till date	Teaching and Research	Delhi University, Botany Department	Reader	2002-2005	Teaching and research	NRC on DNA Fingerprinting, NBPGR, Pusa Campus, New Delhi-110012	Senior Scientist	1998-2002	Teaching and research	National Bureau of Plant Genetic Resources, Pusa Campus, New Delhi-110012	Scientist (Senior scale)	1992-1998	Research	National Bureau of Plant Genetic Resources, Pusa Campus, New Delhi-110012	Scientist S-1	1987-1992	Research
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Administrative Assignments																										

Areas of Interest / Specialization
Plant molecular genetics, Crop Genetics, Molecular analysis of biological diversity, Multipartner (plant-insect-endosymbionts) interactions
Subjects Taught
Genetics, Molecular Genetics, Plant Anatomy, Genetics and Biotechnology of Crop plants, Biotechnology in management of Plant Genetic Resources
Research Guidance
<p>List against each head</p> <ol style="list-style-type: none"> 1. Supervision of awarded Doctoral Thesis- 9 2. Supervision of Doctoral Thesis, under progress-4 3. Supervision of awarded M.Phil dissertations- 8 4. Supervision of M.Phil dissertations, under progress-nil
Publications Profile
<p>List against each head(If applicable) (as Illustrated with examples)</p> <ol style="list-style-type: none"> 1. Books/Monographs (Authored/Edited) 2. Research papers published in Refereed/Peer Reviewed Journals <p>RESEARCH PAPERS PUBLISHED IN REFEREED/PEER REVIEWED JOURNALS</p> <p style="text-align: center;">(Last 10 years only)</p> <ol style="list-style-type: none"> 1. V. Singh, S. Kumar and S. Lakhanpaul (2017) Differential distribution of phytoplasma during phyllody progression in oilseed crop sesame (<i>Sesamum indicum</i> L.) under field conditions - An important consideration for effective sampling of diseased tissue. Crop Protection DOI: 10.1016/j.cropro.2017.01.01 2. . Vibhuti Singh, Sachin Kumar, N.S. Bharat Reddy, M K Naik, K. V. Bhat, Suman Lakhanpaul (2016) Devastation of sesame (<i>Sesamum indicum</i> L.) crops in different agroclimatic zones of India by genetically diverse subgroups of phytoplasma. Crop Protection 86: 24-30. 3. Chakraborty, A., Mitra, J. Bhattacharyya, J. Sikdar,N., Chakraborty, S., Kumar S.,Lakhanpaul, S and Sen S.K. (2015) Transgenic expression of an unedited

mitochondrial orfB gene product from wild abortive (WA) cytoplasm of rice (*Oryza sativa* L.) generates male sterility in fertile rice lines. *Planta*

4. Vashishtha, A., Jehan T. and Lakhanpaul, S. (2013) Genetic diversity and population structure of *Butea monosperma* (Lam.) Taub.-a potential medicinal legume tree. *Physiol. Mol. Biol. Plants* DOI 10. 1007/s/2298-013-0170
5. Kumar S., V. Singh, and S. Lakhanpaul (2012) A candidatus *Phytoplasma asteris* isolate associated with bud proliferation disease of cow pea in India. *New Disease Reports* 25. doi.org/10.5197/j.2044-
6. Bhardwaj D., Lakhanpaul, S. and Tuteja, N. (2012) A wide range of interacting partners of pea G β subunit suggests its multiple functions in cell signalling. *Plant Physiology and Biochemistry* 58:1-5.
7. Sandeep Kaushik, Anand Kumar Pushker, Suman Lakhanpaul, Kewal Krishan Sharma, Rangnathan Ramani (2012) Investigations on some of the important host plants of *Kerria lacca* with reference to phloem distance. *Eurasian Journal of Biosciences* 6:32-38.
8. Ahmad, A., Kaushik S., Ramamurthy, V.V., Lakhanpaul, S., Ramani, R., Sharma, K.K. and Vidyarthi, A.S. (2012) Mouthparts and stylet penetration of the lac insect *Kerria lacca* (Kerr.) (Hemiptera: Tachardiidae). *Arthropod Structure and Development* 41:435-441.
9. Kumar S., V. Singh, and S. Lakhanpaul (2012) A 'Candidatus *Phytoplasma aurantifolia*' strain associated with little leaf of *Mirabilis jalapa* and *Chrysanthemum* sp. *Australasian Journal of Plant Pathology* 7:71-73.
10. Kumar S., V. Singh, and S. Lakhanpaul (2012) First report of 'Candidatus *Phytoplasma asteris*' associated with yellowing of *Barleria prionitis* in India. *New disease reports* (<http://dx.doi.org/10.5197/j.2044-0588.2012.025.008>).
11. Kumar S., V. Singh, and S. Lakhanpaul (2012) Detection and characterization of a phytoplasma associated with witches'-broom disease of *Salvadora persica* in India. *Journal of General Plant Pathology* DOI:10.1007/s 10327-012-0381.
12. Kumar S., V. Singh, and S. Lakhanpaul (2011) Molecular evaluation and phylogeny of a phytoplasma associated with bunchy top disease in its new host Okra (*Abelmoschus esculentus*) in India reveals an evolving lineage within the 16SrI group. *European Journal*

of Plant Pathology, DOI 10.1007/s10658-011-9910-3.

13. Vashishtha, A., Sharma, K.K. and Lakhanpaul, S. (2011) Co-existence, phylogeny and putative role of *Wolabchia* and yeast like Symbiont (YLS) in *Kerria lacca*. *Current Microbiology* 63 (2): 206-212.
14. Kumar S., V. Singh, and S. Lakhanpaul (2011) Co-occurrence of phytoplasma and spiroplasma in sesame plants affected with yellowing disease. *Phytopathogenic Mollicutes*, 1, 47-49.
15. Pushker A.K., S.Kaushik, S.Lakhanpaul, K.K. Sharma, R. Ramani (2011). Preliminary phytochemical investigation on the bark of some of the important host plants of *Kerria lacca* –The Indian lac insect. *Botany Research International* 4(3); 48-51.
16. Sharma, P., Nain V. Lakhanpaul, S. Kumar P.A. (2011). Binding of *Bacillus thuringiensis* Cry 1A toxin with brush border membrane vesicles of maize stem borer (*Chilo partellus* Swinhoe). *J. of Invertebrate Pathology* 106(2): 333-335.
17. Sharma P., Nain V. ,Kumar P. A. Lakhanpaul, S (2010). Synergistic activity between *Bacillus thuringiensis* Cry1Ab and Cry1Ac toxins against maize stem borer (*Chilo partellus* Swinhoe). *Letters in Applied Microbiology* DOI 10.1111/i1472-765.
18. Kumar, S., Singh V., Lakhanpaul, S (2010). First report of *Crotolaria spectabilis* fasciation associated with '*Candidatus phytoplasma asteris*' in India. *Plant Disease* 94: 1265 (Cover article).
19. .Kumar S., Singh V., Lakhanpaul, S (2010). First report of '*Candidatus Phytoplasma asteris*' associated with green ear disease of bajra in India. *Plant Pathology* 22:27.
20. .Vir, R., Bhat K.V., Lakhanpaul, S. (2010). Genetic characterization and species relationships among selected Asiatic *Vigna* species. *Genetic Resources and Crop Evolution* DOI 10.1007/s10722.010. 9550z
21. Kumar, S., Singh V., Lakhanpaul, S (2010) First report of cotton and luffa little leaf associated with *Candidatus Phytoplasma* (16sR1) in India. *Australasian J. Plant Pathology* 5: 117-119.
22. Vir, R, K V Bhat, and Lakhanpaul, S. (2010) Genetic characterization and species relationship among selected Asiatic *Vigna* species. *Genetic Resources and Crop Evolution* 57: 1091-1107.
23. Vir, R, K V Bhat, and Lakhanpaul, S. (2009) Analysis of population substructure, genetic

differentiation and phylogenetic relationships among selected Asiatic Vigna Savi species . *Genetic Resources and Crop Evolution* . 56(6): 78.

24. Vir, R, K V Bhat (2008) Transferability of sequence tagged microsatellite sites (STMS) primers to pulse yielding taxa belonging to Phaseolae . *International Journal of Integrative Biology*. 5: 62-66
25. Arya L., Verma M., Sandhia G. S., Singh S. K. and Lakhanpaul S. (2008) Pattern of genetic relationship as revealed by AFLP markers in Indian sorghum [*Sorghum bicolor* (L.) Moench]. *The Indian J. Genetics Plant Breeding* 68:139-144.

OTHER PUBLICATIONS (EDITED WORKS/BOOKS REVIEWS/FESTSCHRIFT VOLUMES ETC.)

EDITED WORKS

Chapters in Books

- 1) **Lakhanpaul, S.** 1993. Genetic stability under long-term storage conditions. In: Rana, R.S., Saxena, R.K., Saxena, S. and Mittar, V. (Eds) *Conservation and Management of Plant Genetic resources*. NBPGR, ICAR, New Delhi.
- 2) **Lakhanpaul, S.** 1995. Random amplified polymorphic DNA and its utilization. In Rana, R.S., Chandel, K.P.S., Mandal, B.B., Bhat, S.R.; Karihaloo, J.L.; Bhat, K.V. and Pandey, R. (Eds) *Plant Germplasm Conservation: Biotechnological Approaches*, NBPGR, New Delhi, India.
- 3) **Lakhanpaul, S.** 1995. Random amplified polymorphic DNA analysis. In Rana, R.S., Chandel, K.P.S., Mandal, B.B., Bhat, S.R.; Karihaloo, J.L.; Bhat, K.V. and Pandey, R. (Eds) *Plant Germplasm Conservation: Biotechnological Approaches*, NBPGR, New Delhi, India . pp. 253-259.
- 4) Bhat, K.V. and **Lakhanpaul, S.** 1995. Study of isozyme polymorphism. In Rana, R.S., Chandel, K.P.S., Mandal, B.B., Bhat, S.R.; Karihaloo, J.L.; Bhat, K.V. and Pandey, R. (Eds) *Plant Germplasm Conservation: Biotechnological Approaches*, NBPGR, New Delhi, India.
- 5) Bhat KV, **Lakhanpaul S.**, Chandel KPS 1996 *Biochemical and Molecular Techniques for Characterization of Plant Genetic Resources*. Manual for the training course

sponsored by USAID and ICAR, March 12-22, 1996, National Bureau of Plant Genetic Resources, New Delhi-110 012, India, pp. 108.

- 6) Bhat, K.V., **Lakhanpaul, S.**, Rana, M.K. and Chadha, S. 1998. DNA fingerprinting and varietal identification. Souvenir Xth National Seed Seminar on Seed Technology Developments - Challenges for 21st century. Indian Society of Seed Technology. New Delhi. pp29-34.
- 7) Karihaloo, J. L., K. V. Bhat, **S. Lakhanpaul**, T. Mohapatra and G. Randhawa. 2001. Molecular characterization of germplasm. In Dhillon, B. S., K. S. Varaprasad, K. Srinivasan, M. Singh, S. Archak, U. Srivastava and G. D. Sharma. *National Bureau of Plant Genetic Resources: A Compendium of Achievements*. National Bureau of Plant Genetic Resources, New Delhi, pp 166-182.
- 8) Karihaloo, J.L. , Archak, S. and **Lakhanpaul, S.** 2002. Application of molecular markers in assessing genetic diversity of tropical fruit crops species. In Conservation and Cryopreservation of tropical fruit species (Eds) Chaudhury, R., Pandey, R., Malik, S.K. and Bhagmal. IPGRI Office for South Asia, New Delhi/ NBPGR, New Delhi, pp 233-247.
- 9) Duhoon S.S., Sharma S.M, Bhat K.V. and **Lakhanpaul, S.** 2004. Sesame. In Plant genetic Resources: Oilseed and Cash Crops. (Eds) Dhillon, B.S., Tyagi, R.K., Saxena S. and Agarwal, A. Narosa Pub. House, Delhi.
- 10) Duhoon S.S., Sharma S.M, Bhat K.V. and **Lakhanpaul, S.** 2004. Niger. In Plant genetic Resources: Oilseed and Cash Crops. (Eds) Dhillon, B.S., Tyagi, R.K., Saxena S. and Agarwal, A. Narosa Pub. House, Delhi.
- 11) Khanna, Ruchi Vir, Bhat, K.V., **Lakhanpaul, S.** and Bhat K.V. 2008 Molecular genetic differentiation and relationships among selected Asiatic Vigna species. In. Food Legumes for Nutritional Security and Sustainable Agriculture (ed.) M.C. Kharagwal. Proceedings of the Fourth International Food Legume Research Conference (IFLRC-IV) held at New Delhi, India, October 18-22, 2005. pp 604-616.
- 12) **Lakhanpaul, S.**, Singh V., Kumar S. Bhardwaj, D. and Bhat K.V. 2011 “Incorporating abiotic stress resistance in Sesame- the Queen of oilseed crops” In **Improving Crop Resistance to Abiotic stress-Omics Approaches**. (Ed. Tuteja et al .) WILEY-VCH

Verlag , Germany.

- 13) Bhardwaj, D., **Lakhanpaul, S.** and Tuteja, N. 2013. Can G-Proteins be the key proteins for overcoming environmental stresses and increasing crop yields in plants? In: N. Tuteja, & S.S. Gill (Eds) Plant Acclimation to Environmental Stresses XVIII. Springer.
- 14) **Suman Lakhanpaul**, Vibhuti Singh, Scahin Kumar and Deepak Bhardwaj and Kangila Venkataraman Bhat (2012) Overcoming the abiotic stresses in sesame (*Sesamum indicum* L.) – the queen of oil seed crops. In: Improving Crop Resistance to Abiotic Stress (Tuteja et al. Eds), Vol. II, Wiley-VCH Verlag, Weinheim. (ISBN- 978-3-527-32840-6) pg 1251-1283.
- 15) Vibhuti Singh, Sachin Kumar, Amrita Singh, Niti Pathak, Kangila Venkataramana Bhat and **Suman Lakhanpaul** (2016) Unlocking the potential of genetic resources for improvement of sesame (*Sesamum indicum* L.) – the current scenario In: Gene Pool Diversity and Crop Improvement, Volume 1. (Rajpal et al., Eds) Springer (ISBN 2353-474X).
- 16) Ruchi Vir, **Suman Lakhanpaul**, Sonal Malik, Sooraj Umdale and Kangila Venkataramana Bhat (2016) Utilization of germplasm for genetic improvement of mung bean (*Vigna radiate* (L.) Wilczek: The constraints and the opportunities. In: Gene Pool Diversity and Crop Improvement, Volume 1. (Rajpal et al., Eds) Springer (ISBN 2353-474X)

1. *Other publications (Edited works, Book reviews, Festschrift volumes, etc.)*

Conference Organization/ Presentations (in the last three years)

List against each head (If applicable)

Participation as Paper/Poster Presenter (Last five years only)

1. Bhardwaj D, Lakhanpaul S and Tuteja N. (2012) wide range of interacting partners of

Pisum sativum gβ subunit suggests its significant multirole in signal transduction pathway. presented at International Conference on Plant Biotechnology for food security: New Frontiers held at NASC complex, Pusa Campus, during February 21-24,2012. .

2. Kumar S., Singh V. and Lakhanpaul S. (2014) Putative roles of selected OY-M phytoplasma effector proteins in plant hosts: A bioinformatics approach. Presented at International Symposium on Plant Signaling and Behavior, March 7-10, Department of Botany, University of Delhi, Delhi.
3. Bhardwaj D., Lakhanpaul S., Sharma S., Narayanan L. and Tuteja N. (2014) *Pisum sativum* G-protein beta subunit interacts with small pathogenesis-related cysteine rich protein to regulate stomatal functions. Presented at International Symposium on Plant Signaling and Behavior, March 7-10, Department of Botany, University of Delhi, Delhi.
4. Lakhanpaul, S., Singh, V. and Kumar, S. (2014) Understanding plant development from a new teacher-Phytoplasma: A bacterial pathogen that causes genetic reprogramming in plants. Presented at Botany 2014: New Frontiers in Botany, July 22-30, 2014, Boise, Idaho, USA
5. Mann N., Uniyal, P.L. and Lakhanpaul, S. (2014) Study on floral biology and phylogenetic analysis of *Viola L.* (Violaceae) presented at III Global Congress “ Plant Reproductive biology, conservation and crop improvement held during December 15-17th, 2014, Agra, India.
6. Lakhanpaul, S., Singh, V. and Kumar, S. (2014) Understanding plant development from a new teacher-Phytoplasma: A bacterial pathogen that causes genetic reprogramming in plants. Presented at Botany 2014: New Frontiers in Botany, July 22-30, 2014, Boise, Idaho, USA.
7. Malik S. and S. Lakhanpaul (2016) The need for resolving taxonomic ambiguities and the study of genetic diversity in *Barleria* - an underexploited medicinally important genus. Presented at National conference on Agrotechnology, Commerce and Sustainable use of medicinal and aromatic plants held during February 6-7, 2016 at NAASC, IARI, New Delhi.
8. A. Singh, R. Khongbantabam, V. Singh, S. Kumar and S. Lakhanpaul (2016) Diverse phytoplasma strain are associated with sesame (*Sesamum indicum*) phyllody in India.

Presented at IPS 6th International Conference on Plant Pathogens and People, ICAR, New Delhi, held during 23-27 February, 2016.

9. S. Kumar, V. Singh and S. Lakhanpaul (2016) Differential ability of two nested-PCR primers (R16F2/R2n & fu5/rU3) for phytoplasma detection - A critical assessment. Presented at IPS 6th International Conference on Plant Pathogens and People, ICAR, New Delhi, held during 23-27 February, 2016.

10. Lakhanpaul, S. (2016) Unraveling Dawkins extended phenotype- Molecular mechanism for Phytoplasma induced developmental alterations in host plants. Invited talk IPS 6th International Conference on Plant Pathogens and People, ICAR, New Delhi, held during 23-27 February, 2016.

11. Vibhuti Singh, Sachin Kumar, Suman Lakhanpaul (2017) Investigations on the fastidious endophytic bacterial flora of *Catharanthus roseus* L. using PPLO culture method presented at International Conference and Outreach Program on “Environment & Ecology: Sustainability and challenges” 4– 6 January, 2017 held at Delhi University.

12. Sandeep Kaushik, Amit Vashishtha and Suman Lakhanpaul (2017) MLST profiling of *Wolbachia* associated with *Kerria lacca* (Kerr.) presented at International Conference and Outreach Program on “Environment & Ecology: Sustainability and challenges” 4 – 6 January, 2017 held at Delhi University.

13. Amrita Singh, Neetu Tyagi, KV Bhat and Suman Lakhanpaul (2017) Occurrence and distribution of G-quadruplexes in the genomes of four phytoplasmas In INSCR International Conference – 2017 (IIC-2017) Theme: “Role of Microbe-Plant-Animal Interactions in Human Health” 26th -28th September, 2017, Delhi University.

Research Projects (Major Grants/Research Collaboration)

Sl. No.	Title of Project	Funding Agency	Duration	No. of Scientists/ Associates

1.	Studies on the genetic stability of cryopreserved germless under the Megaproject on “In vitro conservation and cryopreservation of important agri-horticultural crops”	Department of Biotechnology (DBT), Govt. of India	1987-1996	Seven
2.	Technology Development for DNA fingerprinting of pulses, oilseeds and fibre crops	Indian Council of Agricultural Research (ICAR), Govt. of India	1996 – 2002	Three
3.	Development of molecular markers for assessment of genetic diversity studies in sesame	Department of Science and Technology (DST), Govt. of India	1997-2000	One
4.	Validation of core collection of sesame using molecular markers	National Agricultural Technology Program (NATP)/ICAR	1999 – 2002	Three
5.	Genetic enhancement of crop species with particular reference to sesame and mungbean	NATP/ICAR	1999 – 2002	Five
6.	Biochemical and molecular characterization of the Lac insect host relationship	Department of Biotechnology (DBT), Govt. of India	2003 -2007	Two
7.	Program support on Restoration Ecology	Department of Biotechnology (DBT), Govt. of India	2005-2012	Four
8.	To understand the nature of diversity in lac insect and the nature of insect X host plant	World Bank through National	2009-ongoing	Four

	interaction	Agricultural Innovative Project (Indian Council for Agricultural Research)		
9	Relationship of Phytoplasma with its host plant and insect vectors	National Fund for Research in Basic , Strategic and Frontier Research, ICA R	2103-ongoing	Two
10.	Detection and characterization of Phytoplasma affecting major floricultural crops of India	Extra mural Research Funding, Indian Council of Agricultural Research	2016-2017	Two
11.	Characterization and Epidemiology of Phytoplasmas Infecting Major Horticultural Crops	Extra mural Research Funding, Indian Council of Agricultural Research	2016-2017	Two

Awards and Distinctions

Awarded NSTS (National Science Talent Search Scholar) Fellowship and availed the fellowship for the entire education period i.e. upto Ph.D.

Secured 1st Position in college in B.Sc.

Secured 2nd position at All India level in ARS (Agricultural Research Services) Examination (1985) held by UPSC (Union Public Service Commission), Govt. of India in the specialization- Genetics and Cytogenetics.

Judged as Excellent Teacher and nominated for the Award of Best Teacher in IARI, (Deemed University)

Association With Professional Bodies

1. *Editing and Reviewing*– Involved with reviewing research publications with a number of national and international journals
2. *Advisory-*
3. *Committees and Boards*
4. *Memberships-*
5. *Office Bearer*

Other Activities

1. Resource person in the Training program on "***In vitro* and Cryopreservation Technology for Gene bank**" organized by INDO-USAID during 10-29, October. 1994.
2. Resource person in the "**Regional Training Course on Seed Genebank Management**" sponsored jointly by the International Plant Genetic Resource Institute (IPGRI), Indian Council of Agricultural Research (ICAR), the Food and Agriculture Organization (FAO), the International Rice Research Institute (IRRI) and International Crop research Institute for Semi- Arid Tropics (ICRISAT) and organized by IPGRI in collaboration with NBPGR during 8-22 December, 1996.
3. Organized and conducted training course on "**Biochemical and Molecular Techniques for Characterization of Plant Genetic Resources**", sponsored by USAID and ICAR, March 12-22, 1996, National Bureau of Plant Genetic Resources, New Delhi-110 012, India.
4. Organized and conducted training programme "**Molecular Marker Techniques for DNA fingerprinting**" at NRC on DNA Fingerprinting, NBPGR, Nov 22-Dec. 18, 1999.
5. Resource person for "Molecular genetic tools for analysis of genetic diversity in plant genetic resources." **International training program on "*In vitro* conservation and cryopreservation of plant germplasm, Principles and Practices**". Sponsored by IPGRI, ICAR and FAO. October 12-25, 2000. NBPGR, New Delhi.
6. Resource person for "**National symposium on Intellectual Property Rights and Indian Germplasm Resources: Emerging Challenges**" organized by Department of Biosciences, Jamia Millia Islamia, New Delhi, October 20-21, 2000.
7. Resource person for the "**Biotechnology & Intellectual Property Rights (IPR)**" in the Orientation cum Workshop on Plant Genetic Resources Management under the HRD component of NATP – Sustainable Management of Plant Biodiversity, NBPGR, Feb 27.2.2001 to 1.3.2001.
8. External faculty "**Molecular Genetics of Plant Biodiversity Assessment**" in the Workshop on Plant Biosystematics organized at Centre for Environmental Management of Degraded Ecosystems, School of Environment Studies. Delhi University, March. 2001.

9. Resource person “**Molecular Markers in characterization of Plant Genetic Resources**” in the Trainers Training on PGR management under the HRD component of NATP – Sustainable Management of Plant Biodiversity, NBPGR, March 2-21, 2001.
10. Co-course coordinator for training programme on “**PCR based techniques for plant DNA fingerprinting**” at NRC on DNA Fingerprinting, New Delhi.
11. Panelist and resource person in the “**Trainers Training program under HRD component of NATP subproject on sustainable Management of Plant Biodiversity**” held from 8-25 January, 2002 for the lecture “Importance of DNA fingerprinting in changing IPR scenario”.
12. Resource person for **Workshop on Biosystematics and conservation of plant diversity** held at CEMDE, Delhi University from January 15-24th, 2003.
13. Resource person for **Workshop on Biosystematics and conservation of plant diversity** held at CEMDE, Delhi University from March 1-10, 2004.
14. Resource person for **Workshop on Biosystematics** held at CEMDE, Delhi University from November 28th to December 13th, January 15-24th, 2004.
15. Member organizing Committee of **4th International Food Legume Research Conference (IFLRC-IV)** held in Indian Agricultural Research Institute (IARI) from October 18-22,2005.
16. Resource person for **Workshop on Taxonomy and Bioprospecting** held at CEMDE, Delhi University from January 28th to February 6th, 2008.
17. Resource person for **Workshop on Taxonomy, reproductive Biology and Conservation** held at CEMDE, Delhi University from February 18-27th, 2009.
18. Resource person for **Workshop on Taxonomy, Ecology and Conservation** held at CEMDE, Delhi University from December 29th to January 7th, 2010.
19. Resource person in UGC sponsored 3-weeks "**Refresher Course on Environmental Studies – Emerging Trends in Sustainable Development**" held during January 7-28, 2013.