



Faculty Details proforma for DU Web-site

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cc: director@ducc.du.ac.in)

Title	Dr, (Mrs)	First Name	Rupam	Last Name	Kapoor	Photograph
Designation		Reader				<small>QuickTime™ and a decompressor are needed to see this picture.</small>
Address		E4/23C Model Town Delhi -110 009				
Phone No		Office				
		Residence				
		Mobile				
Email		kapoor_rupam@yahoo.com				
Web-Page						
Educational Qualifications						
Degree		Institution			Year	
Ph.D.		University of Delhi, Delhi			1998	
M.Phil. / M.Tech.		Panjab University, Chandigarh			1992	
PG		Panjab University, Chandigarh			1991	
UG		Panjab University, Chandigarh			1989	
Any other qualification						
Career Profile						
Organisation / Institution		Designation		Duration		Role
University of Delhi		Research Associate (Part time)		3rd May 1999- 14th Jan., 2002		Research
University of Delhi		Research Associate		15th Jan. 2002- 14th Jan. 2007		Research and Teaching
University of Delhi		DST, Woman Scientist		15th Sept. 2004 - 14th Sept., 2009		Research and Teaching
University of Delhi		Reader		10 th Oct .,2007- 9 th Oct., 2010		Research and Teaching
University Of Delhi		Associate Professor		10 th Oct., 2010 – till date		Research and Teaching
Administrative Assignments						
Areas of Interest / Specialization						
Plant-microbe interactions; In vitro mass propagation of AM spores; Molecular characterization of fungal pathogens						
Subjects Taught						
Pathogens and Pests of Crop Plants; Microbes and Microbial Technology; Molecular Interactions of Plants with Symbionts, Pathogens and Pests						
Research Guidance						

List against each head (If applicable)

1. Supervision of awarded M.Phil dissertations

1. Effect of Arbuscular Mycorrhiza on Growth and Productivity of *Artemisia annua* L (2005).
2. Arbuscular Mycorrhizal in Conservation and Improving Growth of *Curculigo orchioides*: A Vulnerable Medicinal Plant (2006)
3. Arbuscular Mycorrhiza in Synergism with *Trichoderma viride* and *Psuedomonas* sp. for Biocontrol of *Fusarium oxysporum* f. sp. *lycopersici* □ An Integrated Approach (2008)
4. Standardization of the technique for monoxenic culture of arbuscular mycorrhizal fungus through root organ culture (2010)
5. Biocontrol mechanisms in *Trichoderma* and molecular advancements to improve its biocontrol potential – A review (2010)
6. Cultural, Morphological and Molecular Characterization of *Alternaria Carthami* isolates causing leaf spot disease of safflower (2013)

2. Supervision of awarded Ph.D. thesis

1. Transcriptional regulation of *cry4A* gene of *Bacillus thuringiensis israelensis* (2011).
2. AM symbiosis and salinity tolerance: alleviation of ionic, osmotic and oxidative stress in *Trigonella foenum-graecum* L. colonized by *Glomus intraradices* Schenck and Smith (2013).
3. Tagging pathogenicity genes in *Botrytis cinerea* by insertional mutagenesis (2013).

Publications Profile

1. Research papers published in Refereed/Peer Reviewed Journals

a) Research papers published in Academic Journals other than Refereed/Peer Reviewed Journals

1. Mandal S, Heikham Evelin, Giri B, Singh VP, **Kapoor R** 2013. Arbuscular mycorrhiza enhances the production of stevioside and rebaudioside-A in *Stevia rebaudiana* via nutritional and non-nutritional mechanisms. *Applied Soil Ecology* (accepted). Elsevier Science UK
2. Mathur P, Sharma E, Singh SD, Bhatnagar A K, Singh VP and **Kapoor R** 2013 Effect of elevated CO₂ on infection of three foliar diseases in oilseed *Brassica juncea*. *Journal of Plant Pathology* 95: 135-144. Italian Phytopathological Society.
3. Heikham Evelin, Giri B and **Kapoor R** 2013 Ultrastructural evidence for AMF mediated salt stress mitigation in *Trigonella foenum-graecum*. *Mycorrhiza* 23(1):71-86 Springer New York .
4. Heikham Evelin, Giri B and **Kapoor R** 2012 Contribution of *Glomus intraradices* inoculation on nutrient acquisition and mitigation of ionic imbalance in NaCl stressed *Trigonella foenum-graecum*. *Mycorrhiza* 22: 203-217. Springer New York.
5. Esha Sharma, Pal S, Giri B and **Kapoor R** 2011 Molecular interactions among partners of arbuscular mycorrhizal symbiosis. Review of Plant Pathology (In Press, Invited Review). Indian Society of Mycology and Plant Pathology.
6. Saini R, **Kapoor R**, Kumar R, Siddidui TO, Kumar A 2011 CO₂ utilizing microbes – a comprehensive review. *Biotechnology Advances* 29: 949-961 Elsevier Science.
7. Pamil Tayal, **Kapoor R** and A. K. Bhatnagar 2011 Functional synergism among *Glomus fasciculatum*, *Trichoderma viride* and *Pseudomonas fluorescens* on Fusarium wilt in tomato. *Journal of Plant Pathology* 93: 745-750. Italian Phytopathological Society.
8. Heikham Evelin, **Kapoor R** and Giri B 2009. Arbuscular mycorrhiza in alleviation of salt stress: A review. *Annals of Botany* 104: 1263-1280 Oxford Journal
9. Shashi Kant, **Kapoor R** and Banerjee N. 2009 Transcriptional regulation of *cry4A* gene of *Bacillus thuringiensis israelensis* by glucose catabolite repression. *Journal of Bacteriology* 191: 4687-4692. American Society for Microbiology USA
10. Sinha PG, **Kapoor R**, Uprety DC and Bhatnagar AK. 2009. Impact of elevated CO₂ concentration on

- ultrastructure of pericarp and composition of grain in three *Triticum* species of different ploidy levels. *Environmental and Experimental Botany* 66: 451-456
11. Sharma D, Kapoor R and Bhatnagar A.K. 2009 Differential response of *Curculigo orchoides* to native arbuscular mycorrhizal fungal (AMF) communities varying in number and fungal components. *European Journal of Soil Biology* 45: 328-333 Elsevier Science
 12. Sahini R, Majhi MC, Kapoor R, Kumar A, Kumar R 2009 CSD: A database of CO₂ utilizing strains. *Environmental Modelling & Software* 24: 1133–1134.
 13. Kapoor R 2008 Induced resistance in mycorrhizal tomato is correlated to concentration of jasmonic acid. *Online Journal of Biological Sciences* 8: 49-56.
 14. Chaudhary V, Kapoor R and Bhatnagar A K 2008 Effectiveness of two arbuscular mycorrhizal fungi on concentrations of essential oil and artemisinin in three accessions of *Artemisia annua* L. *Applied Soil Ecology* 40: 174-181 Elsevier Science UK
 15. Kapoor R, Sharma D, Bhatnagar A K 2008 Arbuscular mycorrhizae in micropropagation systems and their potential applications *Scientia Horticulturae* 116: 227-239. Elsevier Science UK.
 16. Sharma D, Kapoor R and Bhatnagar A K 2008 AM fungi help in conservation of *Curculigo orchoides* Gaertn. – a vulnerable anticancerous plant. *World Journal of Microbiology & Biotechnology* 24:395-400. Springer Netherlands.
 17. Kapoor R, Chaudhary V and Bhatnagar A K 2007 Effects of arbuscular mycorrhiza and phosphorus application on artemisinin concentration in *Artemisia annua* L. *Mycorrhiza* 17: 581-587. Springer New York.
 18. Giri B, Kapoor R and Mukerji K G 2007 Improved tolerance of *Acacia nilotica* to salt stress by arbuscular mycorrhiza, *Glomus fasciculatum* is partly related to elevated K:Na ratios in root and shoot tissues. *Microbial Ecology* 54: 753–760. Springer New York.
 19. Kapoor R and Bhatnagar A K 2007 Attenuation of cadmium toxicity in mycorrhizal celery (*Apium graveolens* L.). *World Journal of Microbiology & Biotechnology* 23:1083–1089. Springer Netherlands.
 20. Giri B, Kapoor R and Mukerji K G 2005 Effect of arbuscular mycorrhiza *Glomus fasciculatum* and *G. macrocarpum* on the growth and nutrient content of *Cassia siamea* in semi-arid Indian wasteland soil. *New Forests* 29: 63-73. Springer New York.
 21. Giri B, Kapoor R, Agarwal L and. Mukerji K G 2004 Preinoculation with arbuscular mycorrhizae helps *Acacia auriculiformis* grow in degraded Indian wasteland soil. *Communications in Soil Science and Plant Analysis* 35: 193-204. Marcel & Dekker Inc USA.
 22. Kapoor R, Giri B and Mukerji K G 2004 Improved growth and essential oil yield and quality in *Foeniculum vulgare* Mill on mycorrhizal inoculation supplemented with P-fertilizer. *Bioresource Technology* 93: 309-311. Elsevier Science UK.
 23. Giri B, Kapoor R and. Mukerji K G 2003 Influence of arbuscular mycorrhizal fungi and salinity on growth, biomass and mineral nutrition of *Acacia auriculiformis*. *Biology and Fertility of Soils* 38: 170-175. Springer Berlin / Heidelberg.
 24. Kapoor R, Giri B and Mukerji K G 2002 Mycorrhization of coriander to enhance the concentration and quality of oil in seeds. *Journal of the Science of Food and Agriculture* 82: 1-4. Wiley Son UK.
 25. Kapoor R, Giri B and Mukerji K G 2002 *Glomus macrocarpum*: a potential bioinoculant to improve essential oil quality and concentration in dill (*Anethum graveolens* L.) and carum (*Trachyspermum ammi* (Linn.) Sprague), *World Journal of Microbiology & Biotechnology* 18: 459-463. Kluwer Academic Publishers, Netherlands
 26. Koul M, Kapoor R and Luikham N 2001 Effect of lead contamination in soil on development of mycorrhiza in *Cymopsis tetragonoloba* (Linn.) Taub. *Indian Journal of Experimental Biology* 39: 459-463.
 27. Kapoor R, Kaur M and Mukerji K G 2000 VAM and phosphorus induced changes in the rhizosphere ecology of *Anethum graveolens* L. *Journal of Environmental Biology*. 21: 185-191. Triveni Enterprises Lucknow.
 28. Kapoor R, Giri B and Mukerji K G 2000 Effect of mycorrhization on growth and essential oil yield in

Anethum graveolens L. *Indian Journal of Plant Physiology* 6: 77-80. Indian Society for Plant Physiology New Delhi.

29. Giri B, Kapoor R and Mukerji K G 2000 *Sesbania aegyptiaca* seedling response to VA mycorrhization in rehabilitation of two ecologically diverse soils. *Phytomorphology* 50: 327-332. International Society of Plant Morphologists New Delhi.
30. Kapoor R and Mukerji K G 1998 Microbial interactions in mycorrhizosphere of *Anethum graveolens* L. *Phytomorphology* 48: 383-389. International Society of Plant Morphologists New Delhi.
31. Kapoor R, Pathak A, Mago P and Mukerji K G 1996 VAM in two Crucifers. *Eucarpia Cruciferae Newsletter*, 18: 116-117. INRA Rennes France.

2. Other publications (Chapters in Edited Books.)

1. Kapoor R, Evelin H, Mathur P and Giri B 2012 Arbuscular mycorrhiza: approaches for abiotic stress tolerance in crop plants for sustainable agriculture" *In: Crop Improvement Under Adverse Conditions* N Tuteja and S Gill (eds.) Springer Science + Business Media, New York, USA.
2. Balhara M T, Kapoor R and Bhatnagar A K 2005 Seed mycoflora and aflatoxin contamination in mustard during Storage. Pp 321-338. *In: Current Concepts in Botany* KG Mukerji and C Manoharachary (eds) I K International Pvt. Ltd. India.
3. Kapoor R and Mukerji K G 2005 Rhizosphere microbial community dynamics. pp 55-70. *In: Microbial Activity in the Rhizosphere (Soil Biology)* KG Mukerji, C Manoharachary and J Singh (eds.) Springer Verlag Germany
4. Kapoor R 2005 Plant-fungus interaction during development of arbuscular mycorrhiza. *In: Frontiers in Plant Sciences*. KG Mukerji, KVBR Tilak, SM Reddy, LV Gangawante and P Prakash (eds.) I K International Pvt. Ltd. India.
5. Kapoor R, Giri B and Mukerji KG 2002 Soil factors in relation to distribution and occurrence of vesicular arbuscular mycorrhiza. pp 51-86. *In: Techniques in Mycorrhizal Studies* KG Mukerji, C Manoharachary and BP Chamola (eds.) Kluwer Academic Press Netherlands.
6. Giri B, Kapoor R and Mukerji KG 2002 VAM technology in establishment of plants in salinity stress conditions. pp 313-328. *In: Techniques in Mycorrhizal Studies* KG Mukerji, C Manoharachary and BP Chamola (eds.) Kluwer Academic Press Netherlands
7. Neelu and Kapoor R 2001 Mycotoxin contamination in rapeseed-mustard. *In: Health and Dietary Aspects of Mustard Oil*. Pp 56-58. A K Bhatnagar, H B Singh and Shyam Prakash (eds.) Mustard Research and Promotion Consortium New Delhi.
8. Kapoor R 2000 Mycorrhization technology to enhance yield of aromatic and medicinal plants. Pp 391-406. *In: Glimpses in Botany*, K G Mukerji, B P Chamola and A K Sharma (eds.) A P H Publishing Corporation New Delhi.
9. Kapoor R, Manju Tomar, Neelu and Bhatnagar A K 2000 Mycotoxin contamination in rapeseed-mustard. pp 108-110 *In: Rapeseed-Mustard - At the Doorstep of New Millennium*. AK Bhatnagar, RK Shukla and H B Singh (eds.) Mustard Research and Promotion Consortium New Delhi.
10. Kapoor R 1999 Root exudation and its implication on rhizosphere mycoflora. *In: Advances in Microbial Biotechnology*. pp. 351-362. J P Tewari, T N Lakhnupal, J Singh, R Gupta and B P Chamola (eds.) A P H Publishing Corporation New Delhi.
11. Kapoor R and Mukerji K G 1998 VAM in increasing yield of aromatic plants. pp. 197-204. *In: From Ethnomycology to Fungal Biotechnology*. J Singh and K R Aneja (eds.) Plenum Publishing House UK.
12. Srivastava D, Kapoor R, Srivastava S K and Mukerji K G 1996 Vesicular arbuscular mycorrhiza - An Overview. pp. 1-39 *In: Concepts in Mycorrhizal Research*. K G Mukerji (ed.) Kluwer Academic Publishers Netherlands.

Conference Organization/ Presentations (in the last three years)

1. Organization of a Conference

1. **Co-convenor**, Workshop “Physiological Ecology” at 7th International Conference on Mycorrhiza “Mycorrhiza for all – An Under Earth Revolution”, New Delhi 6-11, 2013
2. **Editor**, Abstracts, 3rd Global Conference, Plant Pathology for Food Security organized by Indian Society of Mycology and Plant Pathology and MP University of Agriculture and Technology, Udaipur, January 10-13, 2012.
3. **Co-convenor** of the technical session “Mycology, Mycotoxins and Mycorrhizal Association”. **Co-Chairman** of the technical session “Guman Devi Verma Best Women Scientist Award”. 3rd Global Conference, Plant Pathology for Food Security organized by Indian Society of Mycology and Plant Pathology and MP University of Agriculture and Technology, Udaipur, January 10-13, 2012.
4. **Organising Secretary**, Workshop on Reproductive Biology of Flowering Plants for their Conservation & Improvement, Sponsored By DST Delhi 27-29 April 2012

2. Participation as Paper/Poster Presenter

1. Presented a paper entitled “AM symbiosis and synthesis of terpenoids in aerial parts of Plant” in 7th International conference on “Mycorrhiza for all – An Under Earth Revolution”, New Delhi 6-11, 2013.
2. Presented a paper in National Symposium on “Microbes in Health and Agriculture” organized by School of Life Sciences, Jawaharlala Nehru University, New Delhi March 12-13, 2012
3. Presented a paper entitled “Arbuscular Mycorrhizal Fungi: Partners in the Successful Endeavour of the Plants” 3rd Global Conference, Plant Pathology for Food Security organized by Indian Society of Mycology and Plant Pathology and MP University of Agriculture and Technology, Udaipur, January 10-13, 2012.
4. Presented a paper on “Arbuscular mycorrhiza in sustainable cultivation and conservation of medicinal plants” in An International Conference on Challenging and Emerging Dimensions in Medicinal/ Herbal Plants and their Products: A Global Prospective, at Chennai, November 26-28, 2010
5. Presented a paper on “Arbuscular Mycorrhiza: Role in Sustainable Use and Conservation of Medicinal and Aromatic Plants” in North Zone meet and National Symposium on Microbial Diversity and Bio-prospecting at Department of Botany, University of Jammu, Jammu and Kashmir, October 29-30, 2010
6. Presented a paper on “Arbuscular mycorrhiza in improving the yield of secondary metabolites in Medicinal plants” in 6th International Symbiosis Society Congress at University of Wisconsin-Madison, USA, August 9 – 15, 2009.

Research Projects (Major Grants/Research Collaboration)

1. DBT Project entitled “Cost effective *Glomus fasciculatum* Formulation to Improve the Yield of Three Commercially Important Medicinal Plants- *Artemisia annua*, *Stevia rebaudiana* and *Andrographis paniculata*” to be carried out in collaboration with The Energy Resources Institute (TERI), New Delhi.
2. Ministry of Environment and Forests funded Project entitled “Effect of Elevated CO₂ on some important plant diseases of India”.
3. University of Delhi funded purse grant project entitled “Genetic and Genomic Approaches for Improvement of the Oilseed Crop, *Carthamus tinctorius* (safflower)”.
4. DST project entitled “Application of Agrobacterium tumefaciens mediated transformation for tagging genes responsible for virulence in *Botrytis cinerea*”.

Awards and Distinctions

1. **Y. S. Murty Medal - 2010** for Young Scientist by Indian Botanical Society, India
2. **DST-BOYSCAST Fellow (2008-09)** Plant-Microbe Interaction at Department of Biology, University of Alabama in Huntsville, Huntsville, USA

Association With Professional Bodies

1. **Editor-in Chief** The Botanica (an official magazine of Delhi University Botanical Society)

Membership

1. **Member, International Mycorrhizal Society.**
2. **Member,** International Symbiosis Society, Boston, USA
3. **Life membership,** Indian Botanical Society, Jaipur
4. **Life membership,** Delhi University Botanical Society, Delhi
5. **Life membership,** International Society of Plant Morphologists, Delhi
6. **Life membership,** Society for Conservation and Resource Development of Medicinal Plants, Delhi
7. **Life membership,** Association of Microbiologists of India, Hissar
8. **Life membership,** Indian Science Congress Association, Kolkata

Other Activities

Signature of Faculty Member