




Faculty Details proforma for DU Web-site

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Title	Prof.	First Name	S. B.	Last Name	Babbar	Photograph
Designation		Professor				
Address		Room No. 3, Department of Botany, University of Delhi, North Campus, Delhi 110007				
Phone No	Office	91-11-27666708 (Telefax)				
	Residence	91-11-4707067				
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Web-Page						
Educational Qualifications						
Degree		Institution			Year	
Ph.D.		Ph.D (<i>In Vitro</i> Sporophytic Development of Pollen in some Angiosperms), University of Delhi			1983	
M.Phil.		M.Phil.(Botany), University of Delhi			1978	
PG		M.Sc. (Botany), University of Delhi			1977	
UG		B.Sc. (Hons.- Botany), University of Delhi			1975	
Other qualification		Pre – medical, University of Delhi			1973	
Career Profile						
<p>2004-till date: Professor, Department of Botany, University of Delhi.</p> <p>1996- 2004: Reader, Department of Botany, University of Delhi.</p> <p>1988-1996: Senior Lecturer, Department of Botany, University of Delhi.</p> <p>1985-1988: Lecturer, Department of Botany, University of Delhi.</p> <p>1984-1985: Research Scientist (PL-480 Project), Department of Botany, University of Delhi.</p> <p>Jan-March 1984: Lecturer (ad hoc), K.M. College, University of Delhi</p> <p>Nov 1983-Jan 1984: Research Associate (UGC), Department of Botany, University of Delhi.</p> <p>Jan-April 1983: A Contract, FERRO, USDA, US Embassy, New Delhi</p>						
Administrative Assignments						
<p>1978 – 1979: Vice-President, Delhi University Botanical Society</p> <p>May 1989-August 1996: Resident Tutor of P.G. Men’s Hostel, University of Delhi</p> <p>August 1996-January 1997: Warden of P.G. Men’s Hostel, University of Delhi</p>						

Secretary, Departmental Academic Staff Council from 1993 to 1996.

1986-1994, 1996-202: Teacher-in-charge, teaching arrangements in the department

1994-1996: Teacher-in-charge of Central Tissue Culture Facility in the Department

1995-1999, 2005-2008: Convener, Stores Committee in the Department

1994-2002: Staff Advisor, Delhi University Botanical Society

1999-2003: Convener, Equipment Repair & Maintenance Committee of the Department

1998, 1999, 2000: Co-ordinator for annual B.Sc. Practical examinations of the University of Delhi

2002-2005: Convener, Library Committee, Department of Botany.

Areas of Interest / Specialization

In Vitro Plant Morphogenesis. Research work deals with *In Vitro* Androgenesis, Micropropagation, Alternative Gelling Agents for Microbial and Plant Tissue Culture Media, Role of NO in *In Vitro* Morphogenesis and DNA Barcoding of Plants.

Subjects Taught

Cell Biology, Plant Biotechnology, Phycology

Research Guidance

Supervision of awarded Doctoral Thesis

Kumari, Sunita. 1996. Developmental, Histochemical and Ultrastructural Studies on Thallus to Sporangium *Padina tetrastratica* Hauk., *Spatoglossum variable* Figari et Denotaris and *Pocockiella variegata* (Lamour) Papenfuss. University of Delhi. (under co-supervision of Late Prof. M.R.V. Raghavan)

Ram (née Bhalla), Monika. 1997. Studies in Development on Carposporophyte and Tetrasporophyte of the red alga, *Coelarthrum opuntia* (Endlicher) Börgesen. University of Delhi. (under co-supervision of Late Prof. M.R.V. Raghavan)

Jain, Neeru. 1999. Studies on *In Vitro* Production Of Plants of Black Plum, *Syzygium cuminii* (L.) Skeels, A Myrtaceous Fruit Tree and 'Isugol' and 'Gum Katira' as Alternative Gelling Agents. University of Delhi.

Walia, Neetika. 2003. *In Vitro* Studies on an Edible Oil-yielding Plant, *Carthamus tinctorious* L. and a Medicinal Tree, *Crataeva nurvala* Buch. Ham. University of Delhi.

Raina, Anupam. 2006. *In Vitro* Regeneration and Reproductive Biology of Mulberry. University of Delhi. (under co-supervision of Prof. S. S. Bhojwani)

Jain, Ruchi. 2006. Alternative Gelling Agents for Microbial and Plant Tissue Culture Media: An Exploratory and Comparative Study. University of Delhi.

Goel, Deepa. 2006. Development of Transgenic Tomato (*Lycopersicon esculentum* Mill.) with Improved Tolerance to Drought and Salinity. University of Delhi. (under co-supervision of Dr. K. C. Bansal, NRCPB, IARI, New Delhi)

Misra, Sasmita. 2007. Molecular Analysis of Drought Stress Tolerance, *In Vitro* Propagation and Genetic Fidelity of Micropropagated *Populus x euroamericana* Plants. University of Delhi. (under co-supervision of Prof. S.C. Gupta).

Kaur, Amandeep. 2008. Safflower: *In Vitro* Multiplication, Stress Physiology and Selection of Salt-Tolerant Variants. University of Delhi.

Lata, Charu. 2010. Putative Role of Nitric Oxide in *In Vitro* Morphogenesis. University of Delhi.

Khurana, Ashima. 2012. Investigations in Nitric oxide (NO) Induced flowering of *Lemna aequinoctialis* Welw. University of Delhi.

Hemant Kumar Singh. 2013. DNA barcoding of some species of *Dendrobium* Swartz. University of Delhi (co-supervisor Dr. Saurabh Raghuvanshi, Department of Plant Molecular Biology, University of Delhi).

Iffat Parveen. 2013. Evaluation of recommended loci for DNA barcoding of Indian orchids. University of Delhi.

Supervision of Doctoral Thesis, under progress

Deepshikha Chatterjee. Nitric oxide and *in vitro* flowering. University of Delhi.

Deepak Singh. Developing easy-to-use cost effective *in vitro* and agro-technologies for mass multiplication of selected orchids. University of Delhi.

Shryaeesee Biswas (Under joint-supervision of Prof. AK. Bhatnagar). Effect of mercury and arsenic on *Withania somnifera* and *Plumbago zelanica*. University of Delhi.

Saloni. DNA barcoding of medicinal plants. University of Delhi.

Akansha Priya. Applicability of DNA barcoding for authenticating herbal plants.

Shiva Tripathi. Tissue and suspension culture of selected medicinally important plants.

Samvedna Chauhan. Role of Nitric Oxide in Plant Growth and Development.

Supervision of awarded M.Phil dissertations

Narayan, Jai Prakash. 1997. Albino Plant Production in Anther Cultures: An Enigmatic Problem Impeding the Application of *In Vitro* Androgenesis in Improvement of Cereal Crops. University of Delhi.

Kalia, Sanjay. 1997. Development of Plants with Variant Gametophytic Genome in Anther Cultures: A Review. University of Delhi.

Sahay, Shalini. 2000. Isolated Microspore Culture of *Brassica*: A Review . University of Delhi.

Jain, Ruchi. 2001. Guar Gum as an Alternative Gelling Agent for Culture Media : A Preliminary Assessment. University of Delhi.

Rajnee, Km. 2001. Towards Micropropagation of two Ligneous Taxa: *Jacaranda acutifolia* Humb. & Bonpl. and *Choerospondias axillaries* B. L. Burt & A. W. Hill. University of Delhi.

Misra, Jitendra Kr. 2003. *In Vitro* Androgenesis: Events Preceding its Final Manifestation. University of Delhi.

Devi, Rajkumar Sanyaima. 2004. Cryopreservation of *In Vitro* Grown Axillary Shoot Buds of *Crataeva nurvala* Buch. Ham. University of Delhi.

Gangotri, W. 2007. Checking the Applicability of Guar Gum Derivatives and Cross-linked Guar Gum for culture Media. University of Delhi.

Devi, Lemis K. 2009. Preliminary Investigations on the Effects of Nitric Oxide on Senescence of Detached Cotyledonary Leaves of *Brassica juncea*. University of Delhi.

Saloni 2011. DNA barcoding of medicinal plants: an *in silico* approach. University of Delhi.

Samvedna Chauhan. 2012. Investigating the effects of nitric oxide on *in vitro* flowering of *Lemna gibba* L.: a long day plant. University of Delhi.

Publications Profile

RESEARCH PAPERS PUBLISHED IN REFEREED/PEER REVIEWED JOURNALS

Gangotri, W.; Jain-Raina, R. Ad Babbar, SB. 2012. Evaluation of guar gum derivatives as gelling agents for microbial culture medium. *World J Microbiol Biotech* **28**(5) 2279-2285.

Singh, H.K.; Parveen, I; Raghuvanshi, S. and Babbar, S.B. 2012. The Loci Recommended as universal Barcodes for plants on the basis of floristic studies may not work with congeneric species as exemplified by the DNA barcoding of *Dendrobium* species. *BMC Research Notes* 5: 42 (Article No.).

Parveen, I.; Singh, H.K.; Raghuvanshi, S.; Pradhan, U.C. and Babbar, S.B. 2012. DNA barcoding of endangered Indian

Paphiopedilum species. *Molecular Ecology Resources* **12**: 82-90.

Kalra, C. and Babbar, S.B. 2012. Stimulatory and period-specific effect of nitric oxide on *in vitro* caulogenesis in *Albizia lebbeck* (L.) Benth. *Acta Physiol. Plant.* 34(1): 387-392.

Khurana, A.; Khurana, J.P. and Babbar, S.B. 2011. Nitric oxide induces flowering in the duckweed, *Lemna aequinoctialis* Welw. (Syn. *L. paucicostata* Hegelm.), under noninductive conditions. *J Plant Growth Regul* DOI 10.1007/s00344-011-9199-7.

Goel, D; Singh, A.K.; Yadav, V.; Babbar, S.B.; Murata, N. and Bansal, K.C. 2011. Transormation of tomato with bacterial coda gene enhances tolerance to salt and water stress. *Journal of Plant Physiology* 168 (11): 1286-1294. DOI 10.1016/j.jplph.2011.01.010 .

Jain-Raina, R. and Babbar, S.B. 2011. Evaluation of blends of alternative gelling agents with agar and development of 'xanthagar', a gelling mix, suitable for plant tissue culture media. *Asian Journal Biotechnology* **3(2)**:153-164.

Kalra, C. and Babbar, S.B. 2010. Nitric oxide promotes *in vitro* organogenesis in *Linum usitatissimum* L. *Plant Cell, Tissue & Organ Culture: Journal of Plant Biotechnology.* 103: 353-359.

Goel, D., Singh, A.K., Yadav, V., Babbar, S.B. and Bansal, K.C. 2010. Overexpression of osmotin gene confers tolerance to salt and drought stresses in transgenic tomato (*Solanum lycopersicum* L.). *Protoplasma* **245**: 133-141. DOI: 10.1007/s00709-010-0158-0.

Walia, N, A Kaur and S B Babbar. 2007. Proliferation and differentiation from endosperms of safflower (*Carthamus tinctorius*). *Biologia Plantarum.* 51(4): 749-753.

Walia, N, A Kaur and S B Babbar. 2007. An efficient, *in vitro* cyclic production of shoots from adult trees of *Crataeva nurvala* Buch- Ham. *Plant Cell Reports.* 6(3): 277-284.

Sannayaima, R K, A Kaur, A Gupta and S B Babbar. 2006. Cryopreservation of *in vitro*-grown shoot tips of *Crataeva nurvala* Buch.- Ham, an important tree. *CryoLetters.* 27(6): 375-386.

Jain, R and S B Babbar. 2006. Xanthan gum: an economical substitute of agar for *in vitro* multiplication of an orchid, *Dendrobium chrysotoxum* Lindl. *Current Science.* 91(1): 27-28.

Babbar, S B and R Jain. 2006. Xanthan gum: an economical partial substitute for agar in microbial culture media. *Current Microbiology.* 52(4): 287-292.

Jain, R and S B Babbar. 2006. Xanthan gum: an economical substitute for agar in plant tissue culture media. *Plant Cell Reports.* 25(2): 81-84.

Jain, R, V Anjaiah and S B Babbar. 2005. Guar gum: a cheap substitute for agar in microbial culture media. *Letters in Applied Microbiology.* 41(4): 345-349.

Walia, N, A Kaur and S B Babbar. 2005. *In vitro* regeneration of high oil-yielding variety of safflower (*Carthamus tinctorius* var HUS-305). *Journal of Plant Biochemistry and Biotechnology.* 14(1): 65-68.

Jain, R and S B Babbar. 2005. Guar gum and isubgol as cost-effective alternative gelling agents for *in vitro* multiplication of an orchid, *Dendrobium chrysotoxum*. *Current Science.* 88(2): 292-294.

Babbar, S B, P K Agarwal, S Sahay and S S Bhojwani. 2004. Isolated microspore culture of Brassica: an experimental tool for developmental studies and crop improvement. *Indian Journal of Biotechnology*. 3(2): 185-202.

Jain, N and S B Babbar. 2003. Effect of carbon source on the shoot proliferation potential of epicotyl explants of *Syzygium cuminii*. *Biologia Plantarum*. 47(1): 133-136.

Jain, N and S B Babbar. 2003. Regulatory role of iron and EDTA in shoot development from the epicotyl explants of *Syzygium cuminii*. *Journal of Plant Physiology*. 160(5): 569-572.

Jain, N and S B Babbar. 2003. Regeneration of 'juvenile' plants from the nodal explants of a more than 30-year-old tree of black plum, *Syzygium cuminii* (L.) Skeels. *Plant Cell, Tissue and Organ Culture*. 73(3): 257-263.

Walia, N, S Sinha and S B Babbar. 2003. Micropropagation of *Crataeva nurvala*. *Biologia Plantarum*. 46(2): 181-185.

Jain, N and S B Babbar. 2002. Gum Katira - a cheap gelling agent for plant tissue culture media. *Plant Cell, Tissue and Organ Culture*. 71(3): 223-229.

Ram, M and S B Babbar. 2002. Transient existence of life sans cell membrane: one of the strategies of siphonous seaweeds for survival and propagation. *BioEssays*. 24(7): 588-590.

Ram, M and S B Babbar. 2001. Prochlorophytes: are they still a phylogenetic riddle? . *Proceedings of Indian National Science Academy- Plant*. B 67(1&2): 21-42.

Ram, M, M R Vijayaraghavan and S B Babbar. 2000. Wound response and regeneration in *Coelarthrum opuntia*. *Aquatic Botany*. 68(4): 345-351.

Jain, N and S B Babbar. 2000. Recurrent production of plants of Black Plum, *Syzygium cuminii* (L.) Skeels, a myrtaceous fruit tree, from in vitro cultured seedling explants. *Plant Cell Reports*. 19(5): 634-637.

Babbar, S B, J P Narayan and S S Bhojwani. 2000. Occurrence of albino plants in anther and pollen cultures: a problem limiting the application of in vitro androgenesis in crop improvement. *Plant Tissue Culture*. 10(1): 59-87.

Babbar, S B, S Kumari, L Kaur and M R Vijayaraghavan. 1999. Histochemical studies on tetrasporogenesis in *Spatoglossum variaibile* Figari et de Notaris (Dictyotales, Phaeophyta). *Phytomorphology*. 49(1): 13-20.

Babbar, S B and N Jain. 1998. Isubgol as an alternative gelling agent for plant tissue culture media. *Plant Cell Reports*. 17(4): 318-322.

Kumari, S, L Kaur, M R Vijayaraghavan and S B Babbar. 1997. Tetrasporogenesis and in situ germination in a tropical brown seaweed - *Padina tetrastrumatica* Hauk (Dictyotales, Phaeophyta). *Phytomorphology*. 47(4): 359-369.

Jain, N, S Gupta and S B Babbar. 1997. Isubgol as an alternative gelling agent for microbial culture media. *Journal of Plant*

Biochemistry and Biotechnology. 6(2): 129-131.

Babbar, S B and S C Gupta. 1997. Phasic requirement of coconut milk for *Datura metel* microspore embryogenesis. *Phytomorphology*. 40(1&2): 53-57.

Babbar, S B and S C Gupta. 1986. Obligatory and period specific requirement of iron for microspore embryogenesis in *Datura metel* anther cultures. *Journal of Plant Research*. 99(2): 225-232.

Babbar, S B and S C Gupta. 1986. Putative role of ethylene in *Datura metel* anther cultures. *Physiologia Plantarum*. 68(1): 141-144.

Govil, S, S B Babbar and S C Gupta. 1986. Regeneration of plantlets from in vitro cultured anthers of Black mustard (*Brassica nigra* Koch.). *Plant Breeding*. 97(1): 64-71.

Babbar, S B and S C Gupta. 1986. Induction of androgenesis and callus formation in in vitro cultured anthers of a myrtaceous fruit tree (*Psidium guajava* L.). *Journal of Plant Research*. 99(1): 75-83.

Babbar, S B and S C Gupta. 1986. Effect of carbon source on *Datura metel* microspore embryogenesis and the growth of callus raised from microspore-derived embryos. *Biochemie und Physiologie der Pflanzen*. 181(5): 331-338.

Babbar, S B and S C Gupta. 1986. Promotory and inhibitory effect of activated charcoal on microspore embryogenesis in *Datura metel*. *Physiologia Plantarum*. 66(4): 602-604.

Babbar, S B and S C Gupta. 1985. Chemicals affecting androgenic response in *Datura metel* - glutamine, glutamic acid, serine and inositol. *Beiträge zur Biologie der Pflanzen*. 60(3): 459-466.

Babbar, S B and S C Gupta. 1984. Pathways in pollen sporophyte development in anther cultures of *Datura metel* and *Petunia hybrida*. *Beiträge zur Biologie der Pflanzen*. 59(3): 475-488.

Babbar, S B and S C Gupta. 1983. Pollen plantlet production in anther cultures of *Datura metel* as affected by centrifugation, low pressure and anther density. *Tropical Plant Science Research*. 1(4): 475-488.

Babbar, S B and S C Gupta. 1982. Promotory effect of polyvinylpyrrolidone and L- cysteine HCl on pollen plantlet production in anther cultures of *Datura metel*. *Zeitschrift für Pflanzenphysiologie*. 106(5): 459-464.

Babbar, S B, A Mittal (née Vishnoi) and S C Gupta. 1980. In vitro induction of androgenesis, callus formation and organogenesis in *Iberis amara* Linn. anthers. *Zeitschrift für Pflanzenphysiologie*. 100(5): 409-414.

Babbar, S B and S C Gupta. 1980. Chilling induced androgenesis in anthers of *Petunia hybrida* without any culture medium. *Zeitschrift für Pflanzenphysiologie*. 100(3): 279-283.

Gupta, S C and S B Babbar. 1980. Enhancement of plantlet formation in anther cultures of *Datura metel* L. by pre-chilling of

buds. *Zeitschrift für Pflanzenphysiologie*. 96(5): 465-470.

Babbar, S B and S C Gupta. 1979. Nuclear divisions in protoplasts isolated from microspore tetrads of *Datura metel* - A critical appraisal. *Zeitschrift für Pflanzenphysiologie*. 95(3): 279-282.

Vishnoi, A, S B Babbar and S C Gupta. 1979. Induction of androgenesis in anther cultures of *Withania somnifera*. *Zeitschrift für Pflanzenphysiologie*. 94(2): 169-171.

OTHER PUBLICATIONS (CHAPTERS/ARTICLES IN BOOKS/PROCEEDINGS)

Babbar, S B, N Walia and A Kaur. 2009. Large-scale in vitro multiplication of *Crataeva nurvala*. *Methods in Molecular Biology (Clifton NJ), Protocols for In Vitro Cultures and Secondary Metabolite Analysis of Aromatic and Medicinal Plants*, (ed. S M Jain and P K Saxena) 547: 61-70.

Babbar, S B, N Walia, and A Kaur. 2008. Safflower. In *A Compendium of Transgenic Oil-seed Crop Plants*, ed. C Kole and T H Hall, 247-262. UK: Blackwell Publ Oxford.

Babbar, S B, M Ram and A Raina. 2006. Prochlorophytes: phylogenetic riddle to important players in global environment. In *Biodiversity, Conservation, and Systematics*, ed. P Singh, 21-42. Jodhpur: Scientific Publishers.

Babbar, S B, N Kumari and J K Mishra. 2004. In Vitro androgenesis: events preceding its cytological manifestation. In *Plant Biotechnology and Molecular Markers*, ed. P S Srivastava, A Narula and S Srivastava, 1-17. New Delhi: Anamaya Publishers.

Babbar, S B and N Jain. 2000. Biotechnology of ornamental flowering plants. In *Biotechnology in Horticulture and Plantation Crops*, ed. K L Chadha, P N Ravindran and L Sahijram, 704-793. New Delhi : Malhotra Publishing House.

Babbar, S B, N Walia and S N Raina. 2000. In vitro androgenesis and its application to horticultural crops. In *Biotechnology in Horticulture and Plantation Crops*, ed. K L Chadha, P N Ravindran and L Sahijram, 79-119. New Delhi: Malhotra Publishing House.

Babbar, S B and S Kalia. 1998. Plants with altered or non gametophytic genome in anther cultures. In *Plant Tissue Culture and Molecular Biology; Applications and Prospects*, ed. P S Srivastava, 17-64. New Delhi: Narosa Publishing House.

POPULAR ARTICLES:

Babbar, S.B. 1996. Prions: the infectious agents apparently lacking nucleic acids. *The Botanica* **46**: 231-236.

Babbar, S.B. and Jain, N. 1997. Gene silencing: a bane or boon. *The Botanica* **47**: 53-57.

Walia, N. and Babbar, S.B. 1998. 'Porphyria' – a metabolic disorder makes no distinction between plants and animals. *The Botanica* **48**: 129-134.

Babbar, S.B. and Ram, M. 1999. Synchronous mass spawning in siphonous algae: a reproductive strategy for efficient self propagation. *The Botanica* **49**: 116-119.

Walia, N. and Babbar, S. B. 2000. Biosensors. *The Botanica* **50**: 119-124.

Sahay, S. and Babbar, S. B. 2000. Biological warfare: concepts and implications. *The Botanica* **50**:112-128.

Ram, M. and Babbar, S. B. 2002. 'Raktbeej' and *Bryopsis*: fantasy and reality! *The Botanica* **51**: 67-71.

Conference Organization/ Presentations (in the last three years)

Conference Presentations/Participation

Participated in the National Conference on “Medicinal Orchids: Sustainable Use & Benefit Sharing for Rural & Tribal Communities” organized by the Orchid Society of India at Panjab University, Chandigarh from March 29-30, 2011. Chaired the first Technical Session of the Conference and presented a paper on “DNA Barcoding of Medicinal Orchids” in the Third technical session of the Conference.

Participated as an expert in the Project Review Group (Botany & Forestry) Committee meeting of the Uttarakhand Council of Science and Technology (UCOST) held on July 26, 2011 at UCOST Office, Dehradun.

Delivered inaugural lecture 2011 on “DNA Barcodes: Unique Molecular IDs for Biological Identifications” on the occasion of inauguration of Kalpavriksha: The Botanical Society of Dend Dayal Upadhyaya College, University of Delhi on August 29, 2011.

Inaugurated the activities of “VASUNDHRA”, the Botanical Society of Daulat Ram College, University of Delhi, for the academic session 2011-12 on September 23, 2011 by delivering a lecture on “Unique Molecular IDs for Specific Level Biological Identifications”.

Co-chaired the technical session on Environment Science & Forestry in the Sixth Uttarakhand Science & Technology Congress organized by the Uttarakhand Council of Science and Technology at Kumaun University, S.S.J. Campus, Almora from November 14-16, 2011.

Participated as a member of the expert panel in Brain Storming Session on “Emerging Issues in Forestry Research in the Himalayan Mountains” held at G. B. Pant Institute of Himalayan Environment and Development, Kosi Katarmal, Almora on November 14, 2011.

Presented a paper entitled, “The loci recommended as universal barcodes for plants on the basis of

floristic studies may not work with congeneric species as exemplified by the DNA barcoding of *Dendrobium* species” and chaired the IVth technical session of the National Conference on “Orchid Diversity on India: Science & Commerce” organized by the Orchid Society of India at NASI, Allahabad from December 21-23, 2011.

Inaugurated the activities of the ‘EXOTICA’, the Botanical Society of Sri Venkateswara College, University of Delhi, for the academic session 2011-12 by delivering a lecture on “DNA Barcoding: Providing Unique Molecular IDs to Species for Identification and Detection” on January 10, 2012.

Delivered an Invited lecture on “DNA Barcoding of Indian Orchids” in the National Conference on Recent Trends on Plant Diversity and Conservation Strategies” organized by Department of Botany, Nagaland University in collaboration with East Himalayan Society for Spermatophyte Taxonomy at Nagaland University, Lumami from 20-30 September 2012.

Delivered a talk at Goa University on “DNA Barcoding of Plants: An Overview”, on January 14, 2013.

Delivered a lecture on “DNA Barcoding: An Overview and Our Experience”, in a National Conference organized by Deen Dayal Upadhyaya College on February 4, 2013.

Co-chaired the technical session II on “Propagation and Genetic Improvement through Conventional and Biotech Means” during the conference “National Dialogue on Orchid Conservation & Sustainable Development for Community Livelihood’ organized by NRC for Orchids, ICAR, Pakyong in collaboration with TOSI, Chandigarh at Chintan Bhawan, Gangtok, Sikkim from March 8-9, 2013. In the same Conference delivered an invited lecture on “Providing Unique Molecular IDs to Indian Orchids through DNA Barcoding”.

Participated as an Expert for the session on Biotechnology, Biochemistry and Microbiology in 8th Uttarakhand State Science and Technology Congress (USSTC)-2013 held at Doon University, Dehradun from December 26-28, 2013.

Delivered a Plenary lecture entitled, “Providing Molecular Identities to Plants through DNA Barcoding: Experience with Orchids and Medicinal Plants” in the National Conference on “Plant Bioresource Management and Biotechnology”, organized by Department of Botany, University of Rajasthan, Jaipur from January 29-31, 2014.

Research Projects (Major Grants/Research Collaboration)

Name of Project: Investigations on *In Vitro* Morphogenic Potential of Explanted Tissues and Organs of Guava (*Psidium guajava* L.)

Position in Project: Principal Investigator

Period: 1986-1987

Funding Agency: University Grants Commission

Grant: Rs.15,000.00

Name of Project: *In Vitro* Production of Guava (*Psidium guajava*) Plants through Somatic and

Microspore Embryogenesis

Position in Project: Principal Investigator

Period: 1995-1998

Funding Agency: University Grants Commission

Grant: Rs.3,63,500-00+PA(1)

Name of Project: Selection of Stress Tolerant and Pathogen Resistant Somatocloned and Gametocloned of *Carthamus tinctorius* through Tissue Culture

Position in Project: Principal Investigator

Period: 2001-2004

Funding Agency: University Grants Commission

Grant: Rs.4,20,048-00+Pa(1)

Name of Project: INCO-DC Project on Improved Oilseed *Brassica* Crops through Breeding, Mutagenesis and Transformation in (Doubled) Haploid Plant Material

Position in Project: Co-Principal Investigator

Period: 1999-2002

Funding Agency: European Commission (INCO-DC Project)

Grant: Rs.22,75,534-00

Name of Project: Production of Gynogenic Haploids of Selected Female and Male Clones and Reproductive Biology of Mulberry

Position in Project: Principal Investigator

Period: 2002 – 2005

Funding Agency: Department of Biotechnology, Government of India

Grant: Rs.9,64,000-00

Name of Project: DNA Barcoding of Selected Species of *Dendrobium*, an Orchid, for Checking the Applicability of the Concept to Plants

Position in Project: Project Coordinator and Principal Investigator

Period: 2007 – 2010

Funding Agency: Department of Biotechnology, Government of India

Grant: Rs.56,24,000-00

Name of Project: DNA Barcoding of Endangered Indian Medicinal Plants

Position in Project: Principal Investigator

Period: 20012 – 2015

Funding Agency: Indian Council of Medical Research, New Delhi

Name of Project: Development of high output suspension cultures of selected medicinal plants as perennial source of herbals and biomolecules.

Position in Project: Principal Investigator

Period: 20012 – 2015

Funding Agency: Indian Council of Medical Research, New Delhi

Awards and Distinctions

Recipient of:

National Merit Scholarship of the Ministry of Education & Social Welfare, Government of India, from 1975 to 1977.

All India Junior Research Fellowship of the University Grants Commission, New Delhi from 1977 to 1979.

All India Senior Research Fellowship of the University Grants Commission, New Delhi

from 1979 to 1981.

Senior Research Fellowship of the Council of Scientific & Industrial Research, New Delhi from 1981 to 1982.

Research Associate of the University Grants Commission, New Delhi from Nov 1983 to Jan 1984.

Association With Professional Bodies

Reviewer, Plant Cell, Tissue & Organ Culture
Reviewer, Plant Growth Regulation
Reviewer, Plant Biotechnology Reports
Reviewer, In Vitro – Plant
Reviewer, Current Science
Reviewer, Phytomorphology
Reviewer, Journal of the Orchid Society of India
Reviewer, Indian Journal of Biotechnology
Reviewer, Journal of Medicinal & Aromatic Plant Sciences
Reviewer: Indian Journal of Genetics & Plant Breeding
Reviewer: Journal of Plant Physiology
Reviewer: Bioprocess and Biosystems Engineering
Reviewer: Journal of Biosciences
Reviewer: Molecular Ecology Resources

Advisory

Member, Content Advisory Committee for Biology, Distance Learning Division, Department of Secondary & Higher Education, Ministry of Human Resource Development, Government of India, 2006-2008.

Member, Syllabus Revision Committee as an outside expert for the Course LSC-01 (Cell and Molecular Biology) of the Faculty of Science, Indira Gandhi National Open University, New Delhi.

Memberships

Life Member, Delhi University Botanical Society, Department of Botany, University of Delhi, Delhi.

Life Member, Society for Environmental Scientists, Delhi.

Life Member, Eco-transformation Center: Center for Environment and Rural Upliftment, Delhi.

Life Member, Society for Plant Biochemistry and Biotechnology, New Delhi.

Life Member, International Society of Plant Morphologists, Delhi.

Life Member, The Orchid Society of India, Chandigarh.

Member, Committee of Courses constituted by the University of Delhi for the revision and semesterization of the undergraduate course on Agro-chemicals and Pest Management (2011).

Member-Secretary, University Units Complaint Committee (Faculty of Science), University of Delhi (2011-12).

Member, Governing Body, Ramanujam College, University of Delhi (2012 -).

Member, Governing Body, Maharaja Agrasen College, University of Delhi (2012 -).

E.C. nonminee on the Management Committee of Mansarovar Hostel, University of Delhi (2012-)

Office Bearer

Staff Advisor, Delhi University Botanical Society, Department of Botany, University of Delhi, 1994-2002, 2007-2008.

Councilor, Executive Council of International Society of Plant Morphologists (ISPM).

Other Activities

Prepared seven web-enabled chapters for 'SAKSHAT', One-Stop Educational Portal of the Department of Distance Learning, Ministry of Human Resource Development, Government of India.

DNA SEQUENCES SUBMITTED TO GENBANK, NCBI

Total: 3360 (Accession Nos HM054534 – HM055361, HQ998448 – HQ998638, JF713083 – JF713434, JN004339 – JN005701, JN114427 – JN115056

Signature of Faculty Member

- You are also requested to also give your complete resume as a DOC or PDF file to be attached as a link on your faculty page.