




Faculty Details proforma for DU Web-site

Title	Mr.	First Name	Pradeep	Last Name	Kumar Burma	Photograph
Designation		Professor				
Address		Department of Genetics, University of Delhi South Campus, Benito Juarez Road, New Delhi 110021				
Phone No	Office	91-11-24115221				
	Residence	91-11-24118329				
	Mobile					
Email	pburma@south.du.ac.in					
Web-Page	genetics.du.ac.in					
Educational Qualifications						
Degree		Institution			Year	
Ph.D.		Banaras Hindu University			1989	
M. Sc. (Zoology)		Banaras Hindu University			1982	
B.Sc. (Zoology Hons.)		Banaras Hindu University			1980	
Career Profile						
Organization		Year		Position		
Academic						
Department of Genetics University of Delhi South Campus		01.01.2009 – to date		Professor		
-do-		01.01.2006 – 31.12.2008		Associate Professor		
-do-		14.02.2002 - 31.12.2005		Reader		
-do-		27.07.1998 – 13.02.2002		Senior Lecturer		
-do-		03.06.1993 – 26.07.1998		Lecturer		
Department of Biophysics Indian Institute of Science Bangalore		January 1990 – May 1993		Research Associate		
Administrative						
Chairperson, Governing Body, Atma Ram Sanatan Dharma College, 07.08.2021 to date						
Dean, Faculty of Interdisciplinary and Applied Sciences, 16.09.2015 to 15.09.2018						
Chairperson, Governing Body, Gargi College, 29.02.2016 to 28.02.2018						
Head, Department of Genetics, 08.09.2015 to 15.09.2018						

Head, Department of Biophysics, 16.09.2015 to 11.05.2017
Head, Department of Physical Education and Sport Sciences, 16.09.2015 to 21.01.2016
Joint Proctor, University of Delhi, 2012
Administrative Assignments
Chairperson and member of several committees set up for functioning of different facilities at UDSC.
Areas of Interest / Specialization
Teaching: Genetics Research: Plant Biology – Expression of transgene expression in plants: analyzing promoters, codon usage, UTRs and introns. Developing transgenics for hybrid seed production and insect resistance in cotton
Subjects Taught
<ul style="list-style-type: none"> • Concepts in Genetics • Gene Expression and Regulation • Developmental Biology • Experiments in Recombinant DNA Technology and Bacterial Genetics
Research Guidance
<p style="text-align: center;"><i>Supervision of awarded Doctoral Thesis</i> - 16</p> <ol style="list-style-type: none"> i. Suma Chakravarthy (2000): Modifications of the CaMV 35S promoter as a strategy towards circumventing homology based gene silencing ii. Simran Bhullar (2003): Strategies towards developing promoters to circumvent homology based gene silencing : CaMV 35S promoter as a model iii. Sudipta Datta (2006): Analysis of CaMV 35S promoter and testing synthetic promoters for homology based gene silencing iv. Ranjana Verma (2006): Molecular genetics of schizophrenia and bipolar disorder (Joint supervision) v. P. Kavita (2008): Structural and expression analysis of tapetum specific promoters in <i>Brassica</i> species vi. Parul Aggarwal (2011): Optimizing transgene expression in plants: Identification and testing of promoters from <i>Arabidopsis thaliana</i> and analyzing codon usage patterns. vii. Gurpreet Kaur (2012): Studies on improving transgene expression in dicotyledonous plants by intron-mediated enhancement viii. Shaveta Kanoria (2012): Studies on the role of a synthetic 5'UTR on transgene expression in dicotyledonous plants ix. Rakhee Lohia (2014): Role of HDACs during growth, development and differentiation of <i>Dictyostellium discoideum</i> (Joint supervision) x. Kaur Kulwinder (2014): Development of transgenic lines in rice for male sterility (Joint supervision) xi. Amita Kush Mehrotra (2015): Analysis of promoters of genes expressed in anthers of cotton and development of an intron containing <i>barnase</i> gene xii. Madhurima Kahali (2017) : Studies to delineate region(s) of Cry1Ac protein responsible for its adverse effects on regeneration and growth of transgenic tobacco (<i>Nicotiana</i>

tabacum cv. Xanthi) plants

- xiii. Neetu Verma (2018): Analysis of tapetum specific promoter A9 from *Arabidopsis thaliana*
- xiv. Preeti Kundanani (2019): Characterization of tapetum specific promoter TA29 from *Nicotiana tabacum*
- xv. Shipra Saxena (2021): Developing transgenics in Brinjal for resistance to shoot and fruit borer by using RNAi strategy
- xvi. Kamlesh Soni (2021): Studies on tapetum specific promoters from cotton and tobacco

Supervision of Doctoral Thesis, under progress - 1

- i. Minnhazudin Bm: Understand the role of different transcription factors in regulating tapetum specific promoter like TA29 from tobacco

Supervision of awarded M.Phil dissertations - 4

- i. Parul Agarwal (2004): Isolation, sequencing and phylogenetic footprinting of tapetum specific A9-like genes from *Brassica* species.
- ii. Sandipa Singh (2005): Variability in transgene expression in plants.
- iii. Neeti Yadav (2008): Functional analysis of CaMV35S promoter: studies on subdomain B4.
- iv. Varsha Garg (2012): An analysis of two 5'UTR from *Arabidopsis thaliana* on transgene expression in tobacco

Publications Profile

RESEARCH PAPER

1. **Burma PK** (2021) An alternative approach to how biology practicals are currently conducted in the Indian education system **GPG Journal of Science Education** 2:08-11
2. Soni KK, Mehrotra AK and **Burma PK** (2021) Engineering the AEG1 promoter from cotton to develop male sterile lines **Plant Cell Reports** doi.org/10.1007/s00299-021-02704-6
3. Agarwal P, Gautam, T, Singh AK and **Burma PK** (2019) Evaluating the effect of codon optimization on expression of *bar* gene in transgenic tobacco plants **Journal of Plant Biochemistry and Biotechnology** 28:189-202
4. Paritosh K, Singh AK, Mehrotra AK, Pental D and **Burma PK** (2018) Identification and characterization of the promoter of a gene expressing mainly in the tapetum tissue of cotton (*Gossypium hirsutum*. L) **Plant Biotechnology Reports** 12:377-388
5. Lohia R, Jain P, Jain M, Mishra H, **Burma PK**, Shrivastava A, Saran S (2018) Deletion of Dictyostelium discoideum Sir2A impairs cell proliferation and inhibits autophagy **Journal of Biosciences** 43:351-364
6. Sharma PA, Verma V, **Burma PK** (2018) Analysis of activity driven by Upstream Regulatory Modules (URM) of tapetum specific genes TA29 and A9 at ectopic locations in tobacco transgenics **Journal of Plant Biochemistry and Biotechnology** 27:443-452
7. Sharma PA, **Burma PK** (2018) An *in silico* analysis of upstream regulatory modules (URMs) of tapetum specific genes to identify regulatory *cis*-elements and transcription factors **American Journal of Molecular Biology** 8.15-25

8. Verma N, **Burma PK** (2017) Regulation of tapetum-specific A9 promoter by transcription factors AtMYB80, AtMYB1 and AtMYB4 in *Arabidopsis thaliana* and *Nicotiana tabacum* **The Plant Journal** 92:481-494
9. Kumar P, Kaur K, Purty RS, Mohan M, **Burma PK** (2017) Development of male sterile transgenic lines in rice by tapetum specific expression of *barnase* gene **Journal of Plant Biotechnology** 44:364-371
10. Lohia R, Jain P, Jain M, **Burma PK**, Shrivastava A, Saran S (2017) *Dictyostelium discoideum* Sir2D protein, an ortholog of human SIRT1, modulates cell-type specific gene expression and is involved in autophagy **The International Journal of Developmental Biology** 61:95-104
11. Kahali M, Soni KK, **Burma PK** (2017) Studies on trans-generational transcriptional silencing of *cry1Ac* gene in tobacco transgenics **American Journal of Molecular Biology**, 7: 1-10
12. Singh AK, Kumar P, Kant U, **Burma PK**, Pental D (2016) High expression of Cry1Ac protein in cotton (*Gossypium hirsutum*) by combining independent transgenic events that target the protein to cytoplasm and plastids **PLoS ONE** 11(7): e0158603. doi:10.1371/journal.pone.0158603
13. Bisht NC, Jagannath A, Rehna Augustine, **Burma PK**, Gupta V, Pradhan A and Pental D (2015) Effective restoration of male-sterile (*barnase*) lines requires overlapping and high levels of barstar expression: A multi-generation field analysis in *Brassica juncea* **Journal of Plant Biochemistry and Biotechnology** 24:393-399
14. Mehrotra AK, Bhullar S and **Burma PK** (2014) Development of intron-containing barnase gene (*barnase-int*) encoding a toxic protein to facilitate its cloning in bacterial cells **Journal of Plant Biochemistry and Biotechnology** 23:435-439
15. Verma N, **Burma PK** (2014) A method to synthesize cDNA constructs by based recombinational cloning **American Journal of Molecular Biology** 4:16-19
16. Agarwal P, Garg V, Gautam T, Pillai B, Kanoria S and **Burma PK** (2013) A study on the the influence of different promoter and 5'UTR (URM) cassettes from *Arabidopsis thaliana* on the expression level of the reporter gene β -glucuronidase in tobacco and cotton **Transgenic Research** doi: 10.1007/s1248-613-9757-9
17. Kumar P, Pental D and **Burma PK** (2013) Structural and transcriptional characterization of *rbcS* genes of cotton (*Gossypiumhirsutum*) **Plant Molecular Biology Reporter** 31:1176-1183 doi: 10.1007/s11105-013-0576-1
18. Kanoria S and **Burma PK** (2012) A 28nt long synthetic 5'UTR (synJ) as an enhancer of transgene expression in dicotyledonous plants **BMC Biotechnology** 12:85 doi:10.1186/1472-6750-12-85
19. Rawat P, Singh AK, Ray K, Chaudhary B, Kumar S, Gautam T, Kanoria S, Kaur G, Kumar P, Pental D and **Burma PK** (2011) Detrimental effect of expression of *Bt* endotoxin Cry1Ac on *in vitro* regeneration, *in vivo* growth and development of tobacco and cotton transgenics **Journal of Bioscience** 36(2): 363-376
20. Bhullar S, Datta S and **Burma PK** (2011) Delayed *trans*-inactivation of synthetic domain 35S promoters by "tobacco 271 locus" due to reduced sequence homology **Plant Molecular Biology Reporter** 29: 1-11
21. Jagannath A, Sodhi YS, Gupta V, Mukhopadhyay A, Arumugam N, Singh I, Rohatgi S, **Burma PK**, Pradhan AK, Pental D (2011) Eliminating expression of erucic-acid encoding loci allows the identification of 'hidden' QTL contributing to oil quality fractions and oil content in *Brassica*

22. Bhullar S, Chakravarthy S, Pental D and **Burma PK** (2009) Analysis of Promoter Activity in Transgenic Plant by Normalizing with Reference Gene: Anomalies Due to Influence of Test Promoter on Reference Promoter **Journal of Bioscience** 34(6): 953-962
23. Rawat P, Kumar S, Pental D and **Burma PK** (2009) Inactivation of a transgene due to transposition of insertion sequence (IS136) of *Agrobacterium tumefaciens* **Journal of Bioscience** 34(2): 199-202
24. Rawat P, Ray K, Pental D and **Burma PK** (2008) Mutant *acetolactate synthase* gene conferring resistance to the herbicide "imazethapyr" is an efficient *in vitro* selection marker for genetic transformation of cotton **Current Science** 95(10):1454-1458
25. Kavita P and **Burma PK** (2008) A comparative analysis of sGFP and GUS protein encoding genes as reporter system for studying temporal expression profiles of promoters **Journal of Bioscience** 33(3):337-343
26. Ray K, Bisht NC, Pental D and **Burma PK** (2007) Development of *barnase/barstar* transgenics for hybrid seed production in Indian oilseed mustard (*Brassica juncea* L. Czern & Coss) using a mutant acetolactate synthase gene conferring resistance to imidazolinone-based herbicide 'Pursuit' **Current Science** 93: 1390-1396
27. Bhullar S, Datta S, Advani S, Chakravarthy S, Gautam T, Pental D and **Burma PK** (2007) Functional analysis of Cauliflower Mosaic Virus 35S promoter: re-evaluation of the role of subdomains B5, B4 and B5 in promoter activity **Plant Biotechnology Journal** 5: 696-708
28. Bisht NC, Jagannath A, **Burma PK**, Pradhan A, Pental D (2007) Retransformation of a male sterile barnase line with the barstar gene as an efficient alternative method to identify male sterile-restorer combinations for heterosis breeding **Plant Cell Reports** 26: 727-733
29. Arumugam N, Gupta V, Jagannath A, Mukhopadhyay A, Pradhan AK, **Burma PK**, Pental D (2007) A passage through in vitro culture leads to efficient production of marker-free transgenic plants in *Brassica juncea* using the Cre-loxP system **Transgenic Research** 16:703-712
30. Panjabi P, **Burma PK**, Pental D (2006) Use of the transposable element Ac/Ds in conjunction with Spm/dSpm for gene tagging allows extensive genome coverage with a limited number of starter lines : Functional analysis of a four-element system in *A. thaliana* **Molecular Genetics and Genomics** 276:533-543
31. Kumar S, Birah A, Chaudhary B, **Burma PK**, Gupta GP, Pental D (2005) Plant codon optimized *cry* genes of *Bacillus thuringiensis* can be expressed as soluble proteins in *E. coli* BL21 Codon Plus strain as NusA- Cry protein fusions **J of Invertebrate Pathology** 88:83-86
32. Bisht NC, Jagannath A, Gupta V, **Burma PK**, Pental D (2004) A two gene- two promoter system for enhanced expression of a restorer gene (*Barstar*) and development of improved fertility restorer lines for hybrid seed production in crop plants **Molecular Breeding** 14:129-144
33. Sivaraman I, Arumugam N, Sodhi YS, Gupta V, Mukhopadhyay A, Pradhan AK, **Burma PK** Pental D (2004) Development of high oleic and low linoleic acid transgenics in a zero erucic acid *Brassica juncea* L. (Indian Mustard) line by antisense suppression of the *fad2* gene **Molecular Breeding** 13:365-375
34. Bisht NC, **Burma PK**, Pental D (2004) Development of 2,4-D resistant lines in Indian mustard (*B. juncea*) **Current Science** 87:367-370
35. Ray K, Jagannath A, Gangwani SA, **Burma PK**, Pental D (2004) Mutant *Acetolactate synthase*

gene is an efficient *in vitro* selectable marker for the genetic transformation of *Brassica juncea* (oilseed mustard) **J of Plant Physiology** 161:1079-1083

36. Bhullar S, Chakravarthy S, Advani S, Datta S, Pental D, **Burma PK** (2003) Strategies for development of functionally equivalent promoters with minimum sequence homology for transgene expression in plants : cis-elements in a novel DNA context versus domain swapping **Plant Physiology** 132:988-998
37. Chandra A, Gupta V, **Burma PK**, Pental D (2003) Patterns of morphogenesis from cotyledon explants of Pigeonpea; **In Vitro Cell Dev Biol.- Plant** 39:514-519.
38. Chaudhary B, Kumar S, Prasad KVSK, Oinam GS, **Burma PK**, Pental D (2003) Slow desiccation leads to high frequency shoot recovery from transformed somatic embryos of cotton (*Gossypium hirsutum* L. cv. Coker 310FR) **Plant Cell Reports** 21:955-960.
39. Jagannath A, Arumugam N, Gupta V, Pradhan A, **Burma PK**, Pental D. (2002) Development of transgenic barstar lines and identification of a male sterile (barnase) / restorer (barstar) combination for heterosis breeding in Indian oilseed mustard (*Brassica juncea*) **Current Science** 82:46-52.
40. Jagannath A, Bandyopadhyay P, Arumugam N, Gupta V, **Burma PK**, Pental D (2001) The use of a Spacer DNA fragment insulates the tissue-specific expression of a cytotoxic gene (barnase) and allows high-frequency generation of transgenic male sterile lines in *Brassica juncea* L. **Molecular Breeding** 8: 11-23.
41. Phogat SK, Gupta R, **Burma PK**, Sen K, Pental D (2001) On the estimation of number of events required for saturation mutagenesis of large genomes. **Current Science** 80: 823-824.
42. Phogat SK, Burma PK, Pental D (2000) High frequency regeneration of Brassica napus varieties and genetic transformation of stocks containing fertility restorer genes for two cytoplasmic male sterility systems **J Plant Biochemistry and Biotechnology** 9: 73-79.
43. Phogat S, **Burma PK**, Pental D (2000) A four-element based transposon system for allele specific tagging in plants - Theoretical considerations **J. Biosciences** 25: 101-107.
44. Mehra S, Pareek A, Bandyopadhyay P, Sharma P, **Burma PK**, Pental D (2000) Development of transgenics in Indian oilseed mustard (*Brassica juncea*) resistant to herbicide phosphinothricin. **Current Science** 78(11): 1358-1364.
45. Raghavan S, **Burma PK**, Brahmachari SK (1997) Positional preferences of polypurine/polypyrimidine tracts in *Saccharomyces cerevisiae* genome : Implications for cis-regulation of gene expression **J Molecular Evolution** 45:485-498
46. Brahmachari SK, Sarkar PS, **Burma PK**, Shaligram US, Pataskar S (1995) Synthetic gene design for modulation of gene expression in vivo In Proceedings of Ranbaxy Symposium on **Molecular Genetics and Gene Therapy** pp:85-97
47. **Burma PK**, Raj A, Deb K, Brahmachari SK (1992) Genome Analysis I: A new approach for visualisation of sequence organisation in genomes **J of Biosciences** 17(4):395-411
48. Brahmachari SK, Sarkar PS, Balagurumoorthy P, **Burma PK**, Bagga R (1991) Synthetic gene design to investigate the role of cis-acting DNA structural elements in regulation of gene expression in vivo **Nucl Acids Res** 19:163-166
49. Lakhota SC, Chowdhuri DK, **Burma PK** (1990) Mutations affecting beta-alanine metabolism influence inducibility of the 93D puff by heat shock in *Drosophila melanogaster* **Chromosoma** 99:296-305
50. **Burma PK**, Lakhota SC (1986) Expression of 93D heat shock puff of *Drosophila melanogaster* in

deficiency genotypes and its influence on activity of the 87C puff **Chromosoma** 94:273-278

51. **Burma PK**, Lakhota SC (1984) Cytological identity of 93D-like and 87C-like heat shock loci in *D. pseudoobscura* **Ind J Exp Biol** 22:577-580

REVIEW ARTICLES

52. Jagannath A, Bandyopadhyay P, Mehra S, Arumugam N, **Burma PK**, Pental D. *Agrobacterium*-mediated genetic transformation of *Brassica juncea*. In Plant Genetic Engineering Vol. II: Improvement of major food crops, Eds. Pawan K. Jaiwal and Rana P. Singh, Sci-Tech. Pub. Co., Texas, USA.
53. Pental D, Pradhan A, Mukhopadhyay A, Gupta V, Arumugam N, Sodhi, YS, **Burma PK**, Verma J, Jagannath A, Bandyopadhyay P, Phogat S, Mehra S, Srivastava A. 2000. Breeding of oilseed *Brassica* species by a combination of conventional breeding and genetic engineering. In Rapeseed-Mustard : At the doorstep of the new millennium, Eds. A.K. Bhatnagar, R.K. Shukla and H.B. Singh, Mustard Research and Promotion Consortium, India.

BOOK REVIEW

Fundamentals of Genetics. G S Miglani. Narosa Publishing House, New Delhi. 2008 in **Current Science** 2009, 96(1) 162-164

Genetically Engineered Crops in Developing Countries. Editors Reddy DVR et al., Studium Press, USA. 2015 in **Proc. of INSA**

PATENTS

1. Regulation of lethal gene expression in plants. Pental D, Jagannath A, Bandyopadhyay P, Arumugam N, Gupta V, **Burma PK** US Patent: US 6,833,494 dated 21.12.2004 (Granted)
2. A method of obtaining improved fertility restorer lines for transgenic male sterile crop plants and a DNA construct for use in said method. Bhist N, Jagannath A, Gupta V, **Burma PK**, Pental D European patent No: 1644506 dated 07.07.2003 (Granted)
3. A method for producing an insulator construct. Jagannath A, Bandyopadhyay P, Arumugam N, Gupta V, **Burma PK**, Pental D Indian Patent 199542 dated 08.09.2006 (Granted)
4. Regulate expression of insecticidal proteins only in the green tissues of cotton. Singh A, Paritosh Kumar, **Burma PK**, Pental D Indian Patent 201611022018 dated June 27, 2016 (Filed)
5. Transgenic event in cotton with Cry1Ac gene. Singh A, Paritosh Kumar, **Burma PK**, Pental D Indian Patent 201611018037 dated May 25 2016 (Filed)

Conference Organization/ Presentations (2020-2021)

1. **The Genes behind Mendel's Factor- from Phenotype to the Genes** – Refresher Course in Life Sciences, UGC_HRDC, Goa University 16.02.2021 – 01.03.2021
2. Journey in Science: from Drosophila to transgenic crops – Inaugural lecture, Botanical Society, Hansraj College, University of Delhi 30.01.2021
3. **Teaching Gene Regulation: A different approach** – Refresher Course in Life Sciences, UGC-HRDC, Ranchi University 01.09.2020 – 14.09.2020

Research Projects (Major Grants/Research Collaboration)

On-going:

1. Analyzing the regulation of tapetum specific TA29 promoter from *Nicotiana tabacum*. Funded by **Science and Engineering Research Board**, Govt. of India

Completed Projects:

2. Bollworm resistance and hybrid seed production in cotton. Bollworms (in collaboration with Prof. Deepak Pental). Funded by **Indian Council of Agriculture Research**, Govt. of India
3. Analyzing the organization of tapetum specific promoters of plants – using the promoter of A9 gene from *Arabidopsis thaliana* as a model. Funded by **Council of Scientific and Industrial Research**, Govt. of India
4. Novel approaches for production of hybrid seeds with characteristics of improved resistance and higher yield – cotton component. Multi-Institutional project funded by **CSIR-NIMITLI**
5. Comparative analysis of expression of *cry1Ac* gene in different cotton transgenic events commercialized in India. Funded by **DU/DST Purse Grant**
6. Knowledge-based design of synthetic promoters to (a) circumvent homology based silencing of transgene in plants and (b) enhance tissue specific expression. Funded by **Department of Biotechnology**, Govt. of India.
7. Characterization of CaMV 35S promoter to develop synthetic promoter(s) for avoiding homology-based gene silencing. Funded by **Department of Biotechnology**, Govt. of India.
8. Development of fully regenerating lines in Indian Cotton cultivars, vectors for cotton transformation and transgenics for resistance to Bollworms (in collaboration with Prof. Deepak Pental) Funded by **Department of Biotechnology**, Govt. of India.
9. Development and analysis of cotton transgenics for resistance to insect pests (Bollworm complex) Funded by **Department of Biotechnology**, Govt. of India.
10. Development of a four-element transposon system for directed tagging of alleles of high agronomic value in crop plants (in collaboration with Prof. Deepak Pental) Funded by **NIMITLI-CSIR**, Govt. of India.
11. Transgenics in (a) Mustard (*Brassica juncea*) for heterosis breeding and (b) pigeonpea (*Cajanus cajan*) for resistance to insect pest *Heliothis armigera* (in collaboration with Prof. Deepak Pental). Funded by **Department of Biotechnology**, Govt. of India.
12. Synthesis of genes modified for enhanced and stable expression in dicotyledonous crops : (A) Bar and *tfdA* genes for conferring herbicide resistance (B) Barstar and barnase encoding genes for heterosis breeding (in collaboration with Prof. Deepak Pental). Funded by **Indian Council of Agricultural Research**, Govt. of India.

Awards and Distinctions

- **Special Appreciation Award for Teachers in Service** on 99th Foundation Day, University of Delhi.
- **INSA Teachers award** for the year 2016, Indian National Science Academy, New Delhi.
- **University Gold Medal**, Banaras Hindu University for standing first in M.Sc. Zoology examination.
- Received **ISPMB visiting scientist** award for 2001 (did not avail).

Association With Professional Bodies

1. Vice President, Indian Society of Cell Biology
2. Member (Delhi University representative) of the Governing Body of Central Board of Secondary Education

3. *Member of*

- Member Secretary, Institutional Biosafety Committee, University of Delhi South Campus
- SERB SRG/NPDF Life Sciences committee
- Academic team for Indian Junior Science Olympiad
- Academic team for Indian Biology Olympiad
- Advisory Committee, PG Diploma Course in Molecular and Biochemical Technology, Sri Venkateswara College, University of Delhi
- The Biotech Research society, India

4. *Reviewing*

Referee for a number of Foreign and Indian scientific journals like BMC Biotechnology, Plant Cell Reports, Plant Physiology, Plant Molecular Biology, Plant Molecular Biology Reporter, Plant and Cell Physiology, Plant Science, Plant Biotechnology Journal, Current Science, Journal of Bioscience, PlosONE.

Other Activities

- i. Invited by International Olympiads Foundation, UAE to coordinate the Biology component of the International Junior Science Olympiad to be hosted in Dubai, UAE
- ii. Observer and Jury member from India at the International Biology Olympiad 2018 held at Tehran, Iran.
- iii. Organized a one-day 'Workshop on Microscopy' supported by Indian Society of Cell Biology and the Department of Genetics
- iv. Team leader of the squad representing India in the International Junior Science Olympiad 2016 held at Bali, Indonesia.
- v. Team leader of the squad representing India in the International Junior Science Olympiad 2015 held at Daegu, Republic of Korea.
- vi. Organized, hands-on-workshop for school teachers to carry out innovative experiments in science in collaboration with Homi Bhabha Centre for Science Education and Centre for Science Education and Communication (DU).
- vii. Involved in selection and training of school students for International Junior Science Olympiad and International Biology Olympiad.
- viii. Deliver lectures/mentor in several Science Camps under INSPIRE internship scheme like Bhaskaracharya College, RKG Institute of Technology for Women. Also deliver talks under the auspices of 'XV Genetic Congress Trust' to school children e.g. APEEJAY School, Bal Bharthi Airforce School
- ix. Am regularly invited to teach at the Academic Staff College of JNU, New Delhi.
- x. Member/Chairperson of several academic and administrative committees of University of Delhi.