

CV of Professor Sudhir K. Sopory, JNU

Name : **Sopory Sudhir Kumar**
Date of Birth : January 7, 1948
Present Position : Vice Chancellor (since 2011)
Address : Jawaharlal Nehru University
New Delhi 110067

Academic Qualification

Degree	Year	University/ Institution
B.Sc. Hons.	1966	J & K University
M.Sc.	1968	J & K University
Ph.D.	1973	University of Delhi

Work Experience

1. University of Delhi 1968-1972
2. Max-Planck-Institute fur Zuchtungsforchung, Koln
Germany 1976-1978
3. Dept. of Botany, University of Texas, U.S.A.
(Visiting Fulbright Fellow) 1981-1982
4. Plant Molecular Biology Lab.
U.S. D.A., Maryland, USA 1987-1988
5. Botanisches Institute der Universitat Munich, Germany
(Visiting Humboldt Professor) 1991-1992
6. At the Jawaharlal Nehru University, New Delhi 1973 -1996
(Assistant Professor 1973-78)
(Associate Professor 1979-84)
(Professor 1985- 1996)
7. Group Leader, Pl. Mol. Biol. 1997 - 2010
International Centre for Genetic Engineering &
Biotechnology, New Delhi
8. Interim Director, 2014-
International Centre for Genetic Engineering &
Biotechnology, New Delhi

Awards

- i. Padamshree, Govt. of India, 2007 (civilian honour given by the President of India)
- ii. Shanti Swaroop Bhatnagar Award, (CSIR) 1987 (given by The Prime Minister of India).
- iii. H.L. Chakravorty Award, Indian Science Congress, 1986. (given by The Vice-President of India)
- iv. Career Award, University Grant Commission, 1985
- v. Salgram Sinha Award, National Academy of Sciences of India, 2001
- vi. Birbal Sahni Medal, Indian Botanical Society, 2001
- vii. Birbal Sahni Centenary Gold Medal Award for Life Time Achievements in Plant Sciences, Indian Science Congress Association, 2005 (given by the Prime Minister of India)
- viii. S.S. Katiyar Award , Indian Science Congress Association, 2010
- ix. Corresponding Membership Award for Non-USA scientists 2010 American Society of Plant Biology. (given first time to an Indian Plant Scientist since its inception in 1932)
- x. Prof. R.N. Tandon Memorial Award, National Academy of Sciences, India, 2012.
- xi. B.M. Johri Memorial Award, Society of Plant Research, India, 2012.
- xii. Jawaharlal Nehru Birth Centenary Award, Indian National Science Academy, New Delhi 2014.
- xiii. T.N. Khoshoo Memorial Award, Orchid Society of India, 2014.
- xiv. Conferred *D.Sc (Honoris Causa)* by Banaras Hindu University, Varanasi, 2012 and Rani Durgawat Vishwavidyalaya, Jabalpur, 2014.

President/Vice-President

- i. Vice-President, Indian Society for Plant Physiology and Biochemistry, 2001-2003
- ii. Secretary(Elected), Plant Tissue Culture Association of India, 2001- 2010
- iii. Vice – President , Indian National Science Academy , 2004-2006
- iv. Vice-President ,Society for Plant Biochemistry and Biotechnology, New Delhi ,2009-2011
- v. President, Indian Society of Plant Physiology, 2013-
- vi. Vice-President, National Academy of Sciences, Allahabad, 2015

Fellowship

- i. Fellow, Indian Academy of Sciences. Bangalore, 1992
- ii. Fellow, Indian National Science Academy, Delhi 1992
- iii. Fellow, National Academy of Sciences, Allahabad, 1994
- iv. Fellow, National Academy of Agricultural Sciences, 2002
- v. Fellow, The World Academy of Sciences (Trieste), 2005
- vi. Elected Fellow, Guha Research Conference, 1989
- vii. Max Planck Society Fellow, 1976
- viii. Fulbright Fellow, USEFI, 1982
- ix. Humboldt Foundation Fellowship, 1991

Award lectures

- i. Gadgil Memorial Award Lecture, Plant Tissue Culture Association, 2000
- ii. R. N. Singh Memorial Lecture, Banaras Hindu University, Varanasi, 2000
- iii. P. Maheshwari Award Lecture, Indian National Science Academy, 2000
- iv. Panchanan Maheshwari Memorial Lecture, Delhi University, 2001
- v. N.B.Das Memorial Award Lecture, Society of Plant Biochemistry and Biotechnology, 2002
- vi. Platinum Jubilee Award Lecture, Indian Science Congress Association, 2003
- vii. Tenth Godnev Award lecture of the Belarus Academy of Sciences, Institute of Photobiology(delivered at Minsk, Belarus; 7th April 2003)
- viii. N. Narayana Memorial Award Lecture, Biochemical Society, Indian Institute of Sciences Bangalore, 2005.
- ix. S.P. Ray-Chaudhuri 75th Birthday Endowment Lecture Award; Indian Society of Cell Biology, 2009 (first time to a plant scientist).
- x. Dr Yellapragada Subba Row Award Lecture, Indraprastha University, Delhi 2009
- xi. G.V. Joshi Lecture Award : Indian Society of Plant Physiology, 2010
- xii. Sisir Kumar Mitra Memorial Lecture Award, 2011-2012, Indian National Science Academy, New Delhi.

- xiii. First H.C. Arya Lecture Award, Plant Tissue Culture Association (India), 2011
- xiv. Dr. Gopinath Sahu Memorial Award Lecture; Rice Research Institute, Cuttack, 2014
- xv. NCL Foundation day lecture , National Chemical laboratory,(CSIR) Pune, 2015

Other Recognitions

- i. Felicitation at BIO-2007 Bangalore by the Govt. of Karnataka, India
- ii. A special issue of Physiology and Molecular Biology of Plants (Springer) brought out on 60th birthday (January 2008)
- iii. Achievement Award, Kashmir Education , Culture and Science Society, Delhi , 2010
- iv. Gaurav Samman, Kashmir Samiti, New Delhi 2011
- v. Recognition by Kashmiri Pandit Sabha, Jammu on the occasion of Centenary Celebrations (Award given by Sh Gulam Nabi Azad, Minister of Health, Govt. Of India), 2014
- vi. Padmapani Award Lecture (26th), Tibet House, Delhi, 2014

List of Publications :

Total in refereed journals	:	220
Book chapters	:	53
Books edited	:	13

A few important publications are listed below:

- 136. Charanpreet Kaur, Ananda Mustafiz, Ananda K. Sarkar, Thilini U. Ariyadasa, Sneha L. Singla-Pareek and Sudhir K. Sopory, 2014. Expression of abiotic stress inducible ETHE1-like protein from rice is higher in roots and is regulated by calcium. **Physiol. Plant**, 152: 1-16.
- 135. Ajit Ghosh, Ashwani Pareek, Sudhir K. Sopory and Sneha L. Singla-Pareek, 2014. A glutathione responsive rice glyoxalase II, OsGLYII-2, functions in salinity adaptation by maintaining better photosynthesis efficiency and anti-oxidant pool. **The Plant Journal**, 80, 93-105.
- 134. Ananda Mustafiz, Ajit Ghosh, Amit K. Tripathi, Charanpreet Kaur, Akshay K. Ganguly, Neel S. Bhavesh, Jayant K. Tripathi, Ashwani Pareek, Sudhir K. Sopory and Sneha L. Singla-Pareek, 2014. A unique Ni²⁺ -dependent and methylglyoxal-inducible rice glyoxalase I possesses a single active site and functions in abiotic stress response. **The Plant Journal**, 78, 951-963.
- 133. Kaur C, Singla-Pareek SL, Sopory SK, 2014. Stress response of OsETHE1 is

- altered in response to light and dark conditions. **Plant Signal Behav.**, 9:e973820.
132. Charanpreet Kaur, Ajit Ghosh, Ashwani Pareek, Sudhir K. Sopory and Sneha L. Singla-Pareek, 2014. Glyoxalase and Stress Tolerance in Plants. **Biochem Soc Trans**, 42:485-490.
 131. Charanpreet Kaur, Sneha L. Singla-Pareek & Sudhir K. Sopory, 2014. Glyoxalase and Methylglyoxal as Biomarkers for Plant Stress Tolerance. **Critical Reviews in Plant Sciences**, 33:6, 429-456.
 130. Kaur C, Vishnoi A, Ariyadasa TU, Bhattacharya A, Singla-Pareek SL, Sopory SK, 2013. Episode of horizontal gene-transfer and gene-fusion led to co-existence of different metal-ion specific glyoxalase I. **Sci Rep.** 3:3076(pages 1-10).
 129. Singh A, Kanwar P, Pandey A, Tyagi AK, Sopory SK, Kapoor S, Pandey GK. 2103. Comprehensive genomics analysis and expression profiling of phospholipase C gene family during abiotic stresses and development in rice. **PLoS One.** 8:e62494.
 128. Nautiyal CS, Srivastava S, Chauhan PS, Seem K, Mishra A, Sopory SK. 2013. Plant growth-promoting bacteria *Bacillus amyloliquefaciens* NBRISN 13 modulates gene expression profile of leaf and rhizosphere community in rice during salt stress. **Plant Physiol Biochem.** 66:1-9.
 127. Mukhopadhyay P, Singla-Pareek SL, Reddy MK, Sopory SK. 2013. Stress-mediated alterations in chromatin architecture correlate with down-regulation of a gene encoding 60S rpl32 in rice. **Plant Cell Physiol.** 54:528-40.
 126. Sharma S, Mustafiz A, Singla-Pareek S, Shankar Srivastava P, Sopory S.K., 2012. Characterization of stress and methylglyoxal inducible triose phosphate isomerase (OscTPI) from rice. **Plant Signal Behav.** 7:1337-1345.
 125. Tripathy Mansa Kumar, Tyagi Wricha, Goswami Mamta, Kaul Tanushri, Singla-Pareek Sneha Lata, Deswal Renu, Reddy Malireddy K., Sopory Sudhir K., 2012. Characterization and Functional Validation of Tobacco PLC Delta for Abiotic Stress Tolerance **Plant Mol. Biol.** 30:488-497.
 124. Agarwal P, Bhatt V, Singh R, Das M, Sopory S.K., Chikara J. 2013. Pathogenesis-Related Gene, JcPR-10a from *Jatropha curcas* Exhibit RNase and Antifungal Activity. **Mol. Biotechnol.** 54:412-425.
 123. Singh J, Reddy GM, Agarwal A, Chadrachar K, Sopory S.K., Reddy MK, Kaul T. 2012. Molecular and structural analysis of C4-specific PEPC isoform from *Pennisetum glaucum* plays a role in stress adaptation. **Gene.** 500: 224-231.
 122. Mahanty S, Kaul T, Pandey P, Reddy RA, Mallikarjuna G, Reddy CS, Sopory, S.K., Reddy MK. 2012. Biochemical and molecular analyses of copper-zinc superoxide dismutase from a C(4) plant *Pennisetum glaucum* reveals an adaptive role in response to oxidative stress. **Gene.** 505: 309-17.
 121. Kumar R, Mustafiz A, Sahoo KK, Sharma V, Samanta S, Sopory, S.K., Pareek A., and Singla-Pareek S.L. 2012. Functional screening of cDNA library from a salt tolerant rice genotype Pokkali identifies mannose-1-phosphate guanylyl transferase gene (OsMPG1) as a key member of salinity stress response. **Plant Mol. Biol.** 79 : 555-68.

120. Singh AK, Kumar R, Pareek A., Sopory S.K., Singla-Pareek S.L. 2012. Overexpression of Rice CBS Domain Containing Protein Improves Salinity, Oxidative and Heavy Metal Tolerance in Transgenic Tobacco. **Mol. Biotechnol.** 52:205-16
119. Sahoo, K.K., Tripathi, A.K., Pareek, A., Sopory, S.K. and Singla-Pareek, S.L. 2011. An improved protocol for efficient transformation and regeneration of diverse indica rice cultivars. **Plant Methods** 7:1:49.
118. Mukhopadhyay,P., Reddy,M.K., Singla_Pareek, S.L. and Sopory, S.K. 2011. Transcriptional downregulation of rice rp132 gene under abiotic stress is associated with removal of transcription factors within the promoter region **PLoS ONE.** 6: e28058.doi10.1371.
117. Samanta, S., Reddy, M.K., Singla-Pareek, S.L. and Sopory, S.K. 2011 Stress and development specific regulation of alternative splicing in plants, **J.Pl. Biol.**37: 19-30.
116. Mustafiz, A, Singh, A.K. Pareek A., Sopory, S.K. and Singla-Pareek, S.L. 2011. Genome wide analysis of rice and Arabidopsis identifies two glyoxalase gens that are highly expressed in abiotic stresses. **Func. Integ. Genomics.** 11: 293-205.
115. Reddy, P.S., Thirulogachander, V., Vasihnavi, C.S., Aakrati, A., Sopory, S.K. and Reddy, M.K. 2011. Molecular characterization and expression of a gene encoding cytosolic Hsp90 from *Pennisetum glaucum* and its role in abiotic stress adaptation. **Gene.** 474: 29-38.
114. Kaul, T., Redy,.P.S., Mahanty, S., Thirulogachander, V., Reddy, R.A., Kumar, B., Sopory, S.K. and Reddy, M.K. 2011. Biochemical and molecular characterization of stress Induced B-carbonic anhydrase from a C4 plant, *Pennisetum glaucum*. **J. Plant Physiol.** 168:601-610.
113. El-Shabrawi, H.L., Kumar, B., Kaul, T., Reddy, M.K. Singla-Pareek, S.L. and Sopory , S.K. 2010. Redox homeostasis, antioxidant defense and methylglyoxal detoxification as markers for salt tolerance in pokkali rice. **Protoplasma.** 245:85-96.
112. Reddy, S.P., Mishra, R., Chakradhar, T., Malik , S., Kaul, T. , Sopory, S.K. and Reddy, M.K. 2010. Molecular cloning and characterization of gene encoding cytoplasmic HSC 70 from *Pennisetum glaucum* may play a protective role against abitoic stresses.. **Mol. Gen. Genomics.** 283; 243-254.
111. Sannan-Mishra, N., Kumar, V., Sopory, S.K. and Mukherjee, S.K. 2009. Cloning and validation of novel miRNA from basmati rice indicates cross talk between abiotic and biotic stresses. **Mol. Gen. Genomics.** 282:463-474.
110. Ramesha A, Kumar, B., Reddy,S.P., Mishra, R. N., Mahanty S.K., Kaul,T. , Nair S, Sopory, S. K.and Reddy,M K. 2009. Molecular cloning and characterization of genes encoding *Pennisetum glaucum* ascorbate peroxidase and heat shock factor: Interlinking oxidative and heat stress responses. **J. Plant Physiol.** 166:1646-1659.
109. Khuswaha,H.R., Singh,A.K., Sopory,S.K., Singla-Pareek SL and Pareek,A. 2009. Genome- wide expression analysis of CBS domain containing proteins in *Arabidopsis thaliana* and *Oryza sativa* reveals their developmental significance and stress regulation. **BMC Genomics.** 10:200 (22 pages). (Highly accessed)

- paper).
108. Kumari, S., Sabharwal- Panjabi, V., Khushwa, H.R., Sopory, S.K., Singla-Pareek, S.L. and Pareek, A.P. 2009. Transcriptome map for seedling stage specific salinity Stress response indicates a specific set of genes as candidates for saline tolerance in *Oryza sativa* L. **Funct. Integ. Genomics.** 9:109-123.
 107. Reddy, P.S., Mahanty, S., Kaul, T., Nair, S., Sopory, S.K. and Reddy, M.K. 2008 A high-throughput genome walking method and its use for cloning unknown flanking sequences. **Anal. Biochem.** 376:258-261.
 106. Palakolanu Sudhakar Reddy, Suresh Nair, Garladinne Mallikarjuna, Tanushri Kaul, Gorantla Markandeya, Sudhir K. Sopory and Malireddy K. Reddy 2008. A high-throughput, low-cost method for the preparation of “sequencing-ready” phage DNA template. **Analytical Biochemistry** 376:258-261.
 105. Tuteja, N and Sopory, S.K. 2008 Plant signalling in stress: G-protein coupled receptors, heterotrimeric G proteins and signal coupling via phospholipases. **Pl. Signaling & Behavior** 3:79-86.
 104. Pradeep K. Agarwal, Parinita Agarwal, Parul Jain, Bhavanath Jha, M.K. Reddy and S.K. Sopory 2008. Constitutive overexpression of a stress inducible small GTP binding protein PgRab7 from *Pennisetum glaucum* enhances abiotic stress tolerance in transgenic tobacco **Pl. Cell Rep.** 27:105-115.
 103. Singla-Pareek, S.L ,Yadav, S.K., Ashwani Pareek, M.K.Reddy and Sopory, S.K.2008 Enhancing salt tolerance in a crop plant by overexpression of glyoxalase II. **Transgenic Research.** 17:171-181.
 102. Mishra, R.N., Reddy, P.S., Nair, S., Markandeya, G., Reddy, A.R., Sopory, S.K. and Reddy, M.K. 2007. Isolation and characterization of expressed sequence tags (ESTs) from subtracted cDNA libraries of *Pennisetum glaucum* seedlings. **Pl. Mol. Biol.** 64:713-732.
 101. Shikha Misra , Yuliang Wu , Gayathri Venkatraman ,Sudhir Sopory , Narendra Tuteja 2007 Heterotrimeric G-proteins complex and GPCR from a legume (*Pisum sativum*): role in salinity and heat stress and cross talk with PLC . **Plant Journal** 51: 656-669.
 100. Sreenivasulu, N., Sopory, S.K. and Kavi Kishor, P.B. 2007. Deciphering the regulatory mechanisms of abiotic stress tolerance in plants by genomic approaches. **Gene.** 388:1-13.
 99. Yadav, S.K., Singal-Pareek, S.L., Kumar, M., Pareek, A. Saxena, M., Sarin, N.B., and Sopory, S.K. 2007. Characterization and functional validation of glyoxalase II from rice. **Protein Expr. Purification.** 51: 126-132.
 98. Agarwal, P, Agarwal, P.K. Nair, S., Reddy, M.K. and Sopory, S.K. 2007. Stress-inducible DREB2A transcription factor from *Pennisetum galucum* is a phosphoprotein and its phosphorylation negatively regulates its DNA –binding activity. **Mol Gen. Genomics.** 277:189-198.
 97. Rajgopal, D, Agarwal, P. , Tyagi, W., Singla-Pareek, S.L., Reddy, M.K., Sopory, S.K. 2007 Charaterization of an isoform of Na/H antiporter from *Pennisetum galucum* that confers high level of salinity tolerance in transgenic *Brassica juncea*. **Molecular Breeding.** 19:137-151.
 96. Mahajan, S., Sopory, S.K. and Tuteja, N. 2006. Cloning and characterization of

- CBL-CIPK signalling components from a legume (*Pisum sativum*). **FEBS Journal**. 273:907-925.
95. Singla-Pareek, S.L, Yadav, S.K., Pareek, A., M.K.Reddy, and S.K.Sopory 2006. Transgenic tobacco overexpressing glyoxalase pathway enzymes grow and set viable seeds in zinc spiked soils. **Plant Physiology**. 140:613-623.
 94. Tyagi, W. Singla-Pareek, S., Nair, S., Reddy, M.K. and Sopory, S.K. 2006. A novel isoform of ATPase c subunit from pearl millet that is differentially regulated in response to salinity and calcium. **Plant Cell Rep**. 25: 156-163.
 93. Yadav, S.K., Singla- Pareek, S.L., Ray, M., Reddy, M.K. and Sopory, S.K. 2005 Methylglyoxal levels in plants under salinity stress are dependent on glyoxalase 1 and glutathione. **Biochem. Biophys. Res. Commun**. 337: 61-67.
 92. Yadav. S.K., M.K. Reddy, S.K.Sopory, Singla –Pareek, S.L. 2005. Transgenic tobacco plants over expressing glyoxalase enzymes resist an increase in methylglyoxal and maintain higher reduced glutathione levels under salinity stress. **FEBS Letts**. 579: 6265 – 6271.
 91. Saxena,M., Bisht, R., Roy, S.D., Sopory, S.K., and Bhalla-Sarin, N . 2005. Cloning and characterization of mitochondrial glyoxalase II from Brassica juncea. **Biochem. Biophys. Res. Commun**. 336:813-819.
 90. Mishra, R.N., Ramesha, A., Kaul, T., Nair, S., Sopory, S.K., Reddy, M.K. 2005. A modified cDNA subtraction to identify differentially expressed genes from plants with universal application to other eukaryotes. **Anal. Biochem**. 345: 149-157.
 89. Tyagi , W., Rajgopal, D., Singla-Pareek, S., Reddy, M.K., and Sopory, S.K. 2005. Cloning and regulation of a stress regulated *Pennisetum glaucum* vacuolar ATPase c gene and characterization of its promoter that expresses in shoot hairs and floral organs. **Plant Cell Physiol**. 46: 1411-1422.
 88. Hettiarachchi, G.H.C.M., Reddy, M.K., Sopory, S.K., Chattopadhyay, S. 2005. Regulation of TOP 2 by various abiotic stresses including cold and salinity in pea and transgenic tobacco plants. **Plant Cell Physiol**. 46: 1154-1160.
 87. Sannan-Mishra, N., Pham, X-H., Sopory, S.K. and Tuteja, N. 2005. Pea DNA helicase 45 overexpression in tobacco confers high salinity tolerance without affecting yield. **Proc. Natn. Acad. Sci. USA**. 102 : 509-524.
 86. Deswal, R., Choudhary, G.K. and Sopory, S.K. 2004. Purification and characterization of a PMA stimulated kinase and identification of PMA induced phosphorylation of a polypeptide that is dephosphorylated by low temperature in Brassica juncea. **Biochem. Biophys. Res. Commun**. 322: 420-427.
 85. Singh, B.N., Sopory, S.K. and Reddy, M.K. 2004. Plant topoisomerases: characterization and functions. **Crit. Rev. Pl. Sci**. 23:251-169.
 84. Venketaraman, G., Goswami, M., Tuteja, N., Reddy, M.K. and Sopory, S.K. 2003. Isolation and characterization of a phospholipase C delta isoform from pea that is regulated by light in a tissue specific manner. **Mol. Gen. Genomics**. 270 :378-386.
 83. Hettiarachchi, G.H.C.M., Yadav, V., Reddy, M.K., Chattopadhyay, S. and Sopory, S.K 2003. Light mediated regulation defines a minimal promoter region of TOP2. **Nucl. Acid Res**. 31:5256-5265.

82. Singh, B.N. Mudgil, Y. Sopory, S.K. and Reddy, M.K. 2003. Molecular characterization of a nuclear topoisomerase II from *Nicotiana tabacum* that functionally complements a temperature sensitive topoisomerase II yeast mutant. **Plant Mol. Biol** 52: 1063-1076.
81. Tuteja, N., Yadav, B., Moudgil, Y., Chandok, M., Reddy, M.K. and Sopory, S.K. 2003. Pea topoisomerase I is phosphorylated and stimulated by casein kinase 2 and protein kinase C. **Plant Physiol.** 132: 2108–2115.
80. Singla-Pareek, S.L., Reddy, M.K. and Sopory, S.K. 2003. Genetic engineering of glyoxalase pathway in tobacco leads to enhanced salinity tolerance. **Proc. Natn. Acad. Sci. USA** 100: 14672-14677.
79. Sahi, C., Agarwal, M., Reddy, M.K., Sopory, S.K. and Grover, A. 2003. Isolation and expression analysis of salt stress associated expressed sequence tags from contrasting rice cultivars using PCR-based subtraction method. **Theor. Appl. Genet.** 106: 620-628.
78. Sherameti, I., Sopory, S.K., Trebicka, A., Pfannschmidt, T and Oelmueller, R. 2002. Photosynthetic electron transport determines nitrate reductase gene expression and activity in higher plants. **J. Biol. Chem.** 277: 46594-46600.
77. Aneeta, Sanan-Mishra, N., Tuteja, N and Sopory, S.K. 2002. Salinity and ABA induced up-regulation and light mediated modulation of mRNA encoding glycine rich RNA binding protein from *Sorghum bicolor*. **Biochem. Biophys. Res. Commun.** 296: 1063 – 1068.
76. Pandey, S. Tiwari, S.B., Tyagi, W., Reddy, M.K., Upadhyaya, K.C. and Sopory, S.K. 2002. A Ca⁺⁺/CaM –dependent kinase from pea is stress regulated and in vitro phosphorylates a protein that binds to ATCaM 5 promoter. **Eur. J. Biochem.** 269:193-204.
75. Reddy, M.K., Nair, S. Sopory, S.K. 2002. Global amplification of cDNA from limiting amounts of tissue: an improved method for gene cloning and analysis. **Mol. Biotech.** 22: 223-230 (cover page article).
74. Mudgil, Y., Singh, B.N., Upadhyaya, K.C., Reddy, M.K. and Sopory, S.K. 2002. Cloning and characterization of a low-temperature inducible and cell cycle specific Topoisomerase I from *Nicotiana tabacum*. **Mol. Gen. Genomics.** 267: 380-390.
73. Reddy, M.K., Nair, S. and Sopory, S.K. 2002. A new approach for efficient directional genome walking using polymerase chain reaction. **Analytical Biochemistry.** 306: 154-158.
72. Pandey, S. and Sopory, S.K. (2001). Zea mays CCaMK: autophosphorylation – dependent substrate phosphorylation and down – regulation by red light. **J. Expt. Bot.** 52: 691-700.
71. Reddy, M. K., Nair, S., Singh, B.N., Mudgil, Y., Tewari, K.K. and Sopory, S.K. (2001). Cloning and expression of a nuclear encoded plastid specific 33 kDA ribonucleoprotein gene (33RNP) from pea that is light stimulated. **Gene.** 263 :179 –187.
70. Chandok, M.R., Sopory, S.K. and Oelmueller, R. (2001). Cytoplasmic kinase and phosphatase activities can induce psaF gene expression in the absence of functional plastids: evidence that phosphorylation / dephosphorylation events are

- involved in interorganellar cross talk. **Mol. Gen. Genet.** 264 : 819 -826.
69. Mishra, N.S., Mallick, B.N. and Sopory, S.K. (2001). Electrical signal from root to shoot in *Sorghum bicolor*: induction of leaf opening and evidence for fast extracellular propagation. **Plant Sci.** 160 :237-245.
 68. Deswal, R. Pandey, G.P., Chandok, M.R., Yadav, N., Bhattacharya, A. and Sopory, S.K. (2000). A novel protein kinase from *Brassica juncea* stimulated by a protozoan calcium binding protein. Purification and partial characterization. **Eur. J. Biochem.** 267 : 3181 – 3188.
 67. Pandey, S., Tiwari, S.B., Upadhyaya, K .C. and Sopory, S.K. (2000). Calcium signalling : Linking environmental signals to cellular functions. **Crit. Rev. Pl. Sci.** 19 : 291 -318.
 66. Reddy, M.K., Nair, S., Singh. B.N., Moudgil, Y., Yadav, B.S. and Sopory, S.K. (1999) Cloning and characterization of topoisomerase II from Pea and correlation of its expression with cell proliferation. **Pl. Mol. Biol.** 41:125-137.
 65. Hop, D.V., Gaikward, A., Yadav, B.S., Reddy, M.K., Sopory, S.K. and Mukherjee, S.K. (1999) Suppression of pea nuclear activity by pea PCNA. **Plant Journal** 19: 153-162.
 64. Deswal, R. and Sopory, S.K. (1999) Glyoxalase I from *B.juncea* is calmodulin stimulated. **Biochem. Biophys. Acta.** 1450:460-467.
 63. Veena, Reddy, V.S. and Sopory, S.K. (1999) Glyoxalase I from *Brassica juncea*: molecular cloning, regulation and its over expression confer tolerance in transgenic tobacco under stress. **Plant Journal.** 17:385-396. (cover page article).
 62. Chandok, M.R. and Sopory, S.K. (1998) Lithium inhibits phytochrome stimulated nitrate reductase activity and transcript level in etiolated maize leaves. **Plant Sci.** 139:195-203.
 61. Deswal, R. and Sopory, S.K. (1998) Biochemical and immunological characterization of *Brassica juncea* glyoxalase -I. **Phytochemistry.** 49:2245-2253.
 60. Sanan, N. and Sopory, S.K. (1998) A role of G-proteins and calcium in light regulated primary leaf formation in *Sorghum bicolor*. **J. Expt. Bot.** 49:1695-1703.
 59. Pandey, S. and Sopory, S.K. (1998) Biochemical evidence for a calmodulin stimulated calcium dependent protein kinase in maize. **Eur. J. Biochem.** 255:718-725.
 58. Chandok, M.R. and Sopory, S.K. (1998) ZmcPKC 70, a protein kinase c type enzyme from maize. Biochemical characterization regulation by phorbol 12 myristate 13 acetate and its possible involvement in nitrate reductase gene expression. **J. Biol. Chem.** 273, 19235-19242.
 57. Sopory, S.K. and Munshi, M. (1998) Protein kinases and phosphatase and their role in cellular signalling in plants. **Crit. Rev. Pl. Sci.** 17, 245-318.
 56. Yadav, N., Chandok, M.R., Prasad, J., Bhattacharya, S., Sopory, S.K. & Bhattacharya, A. (1997) Characterization of EhCabp, a calcium binding protein of *E.histolytica* and its binding proteins. **Mol. Biochem. Parast.** 84, 69-82.
 55. Kusnetsov, V., Bolle, C., Lubberstedt, T., Sopory, S., Herrmann, R.G. & Oelmuller, R. (1996) Evidence for the plastid signal and light operate via the same cis-acting elements in the promoters of nuclear genes for plastid proteins. **Mol. Gen. Genet.** 252,631- 639.
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- events in the phytochrome stimulation of nitrate reductase m-RNA levels and enzyme activity in maize. **Mol. Gen. Genet.** 251, 599-608.
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 52. Chandok, M.R. & Sopory, S.K. (1994) 5-Hydroxytryptamine affects turnover of polyphosphoinositides in maize and stimulates nitrate reductase in the absence of light. **FEBS Lett.** 356, 39- 42.
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- Sci.** 54, 141-146..
37. Sharma, A.K. and Sopory, S.K. (1987) Effect of phytochrome and kinetin on nitrate reductase activity in *Zea mays*. **Plant Cell Physiol.** 28, 397-403.
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 29. Sharma, A.K., and Sopory, S.K. (1984) Independent effects of phytochrome and nitrate on nitrate reductase and nitrite reductase activity in maize. **Photochem. Photobiol.** 39, 491-494.
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 24. Gupta, A., Saxena, I. M., Sopory, S. K. and Guha -Mukherjee, S.(1983) Regulation of nitrate reductase synthesis during early germination of seeds in Barley (*Hordeum vulgare*). **J.Exp. Bot.** 34- 46.
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17. Sharma, R.P., Sopory, S.K. and Guha-Mukherjee, S. (1980) Phytochrome regulation of peroxidase activity. V. Effect of RNA and protein synthesis. **Plant Cell Physiol.** 21, 345-351.
16. Maheshwari, S.C., Tyagi, A.K., Malhotra, K. and Sopory, S.K. (1980) Induction of haploidy from pollen grains in angiosperms. The current status. **Theoretical Applied Genetics.** 58, 193-206.
15. Janki Vijayaraghavan, S., Sopory, S.K. and Guha-Mukherjee, S. (1979). Role of light on the regulation of nitrate reductase level in *Triticum aestivum*. **Plant Cell Physiol.** 20, 1251-1261.
14. Sharma, R.P., Sopory, S.K. and Guha-Mukherjee, S. (1979) Phytochrome regulation of enzyme activity in maize. iv. Photosynthetic independence of peroxidase activity. **Plant Cell Physiol.** 20, 1003-1013.
13. Wenzel, G., Schielder, O., Prezewozny, T., Sopory, S.K. and Melchers, G. (1979). Comparison of single cell culture derived *Solanum tuberosum* plants and model for their application in breeding programme. **Theoretical and Applied Genetics.** 55, 49-66.
12. Janki Vijayaraghavan, S., Sopory, S.K. and Guha-Mukherjee, S. (1979) Ammonia stimulation of nitrate reductase induction in excised leaves of wheat. **Z. Pflanzenphysiologie.** 93, 394-402.
11. Sihag, R. K., Guha-Mukherjee, S. and Sopory, S. K. (1979). Effects of ammonia, sucrose and light on the regulation of nitrate reductase level in *Pisum sativum*. **Physiologia Plantarum.** 45, 281-287.
10. Sihag, R.K., Guha-Mukherjee, S. and Sopory, S.K. (1979) Regulation of nitrate reductase levels in pea, *in vitro* stability by ammonium. **Biochem. Biophys. Res. Commun.** 85, 1017-1024.
9. Jacobsen, E. and Sopory, S.K. (1978) The influence of possible recombination of genotypes and the production of microspore embryoids in anther culture in dihaploid *Solanum tuberosum* and dihaploid hybrids. **Theoretical and Applied Genetics.** 52, 119-124.
8. Sopory, S.K. and Jacobsoen, E. and Wenzel, G. (1978) Production of monohaploid embryoids and plantlets in cultured anthers of *Solanum tuberosum*. **Plant Sci. Lett.** 12, 47-47.
7. Binding, H., Nehls, R., Schielder, O., Sopory, S.K. and Wenzel, G. (1978) Regeneration of mesophyll protoplasts isolated from dihaploid clones of *S. tuberosum*. **Physiologia Plantarum.** 43, 52-55.

6. Sharma, R., Sopory, S.K. and Guha-Mukherjee, S. (1977) Phytochrome regulation of peroxidase activity in maize. II Interaction with hormones, acetylcholine and CAMP. **Z. Pflanzenphysiologie.** 82, 417-427.
5. Sopory, S.K. (1977) Differentiation of callus from cultured anthers of dihaploid clones of *S.tuberosum*. **Z. Pflanzenphysiologie.** 82, 88-91.
4. Sharma, R., Sopory, S. K. and Guha-Mukherjee, S. (1976) Phytochrome regulation of peroxidase activity in maize. **Plant Sci. Lett.** 6, 69-75.
3. Sopory, S.K. and Maheshwari, S.C. (1976) Development of pollen embryoids in anther cultures in *Datura innoxia*. II Effects of growth hormones. **J. Expt. Bot.** 27, 58-68.
2. Sopory, S.K. and Maheshwari, S.C. (1976) Development of pollen embryoids in anther cultures in *Datura innoxia*. General observations and effects of physical factors. **J. Expt. Bot.** 27, 49 - 57.
1. Sopory, S.K. and Maheshwari, S.C. (1972) Similar effect of iron chelating agents and cytokinins on the production of haploid embryos from pollen grains of *Datura innoxia* **Z. Pflanzenphysiologie.** 69, 97-99.

Books Edited

- 1-5. Jain, S.M., **Sopory, S.K.** and Veilleux, R.E. (eds.) In vitro haploid production in higher plants. Published under "**Current Plant Science and Biotechnology in Agriculture**" series by Kluwer Acad. Publishers, Dordrecht, The Netherland, 1996.
 - Vol.1.** Fundamental aspects & methods. pp 356
 - Vol.2.** Applications. pp 438
 - Vol.3.** Important selected plants. pp 424
 - Vol.4.** Cereals. pp 233
 - Vol.5.** Oil ,ornamental & miscellaneous plants. pp 256.
6. Singhal, G.S., Renger, G., **Sopory, S.K.**, Irrgang, K-D., and Govindjee (Eds) 1999. **Concepts in Photobiology: Photosynthesis and Photomorphogenesis.** Narosa Publ. Co. & Kluwer Acad. Publ. Netherlands, 31 chapters.
7. Sopory, S.K. and Maheshwari S.C **Plant Molecular Biology.** Edited a special issue of Current Science, India (Jan 25, 2001)
8. Sopory, S.K., Oelmuller, R . and Maheshwari, S.C. (Eds) 2002. **Signal transduction in plants: Current concepts.** Kluwer Academic/Plenum Publishers, New York pp350.
9. Munshi, M. and Sopory, S.K. 2003. **Biotechnology: applications and careers.** Viva Books Pvt. Ltd , Delhi and Bombay, 174pp
- 10.Sopory, S.K. 2005 (Consulting Editor) In : Kumar, A and Roy, S. (Eds) **Plant Biotechnology and its Applications in Tissue Culture.** I.K. International Publishing House Pvt.Ltd. New Delhi, Mumbai, Bangalore, pp 307
- 11.Kumar, Ashwani and Sopory. S.K. (Eds). 2008.**Recent Advances in Plant Biotechnology.**I.K. International Publishing House Pvt. Ltd, New Delhi pp525
- 12.Pareek, A. Sopory, S.K., Bohnert, H and Govindjee (Eds) 2009 **Abiotic stress adaptation in Plants: physiological, molecular and genomic foundation.**Springer Pp; 600

13. Kumar Ashwani and Sopory, S.K. (Eds). 2009. **Applications of Plant Biotechnology: In vitro propagation, plant transformations and secondary metabolite production**. I.K. International Publishing House Pvt. Ltd, New Delhi (to be released in 2010)

Meetings attended outside India & given Invited/key note lecture

- 2014 Taiwan: visited six universities to give lectures and sign MOUs
2014 USA: University of Washington, St. Louis: to deliver lecture and also to sign MOU
2013 Belgium and Turkey: as **a part of delegation with the President of India**
2011 Asia Culture Forum, Gwnagju, Korea . Delivered Key note lecture
2009 Invited to organize two sessions at FAO meeting at Guadalhara, Mexico
2007 ICGEB-TWAS-Biosafenet meeting on Abiotic stress in plants, Rome
2007 SEB Annual meeting at Glasgow ,
2007 Molecular Plant meeting at Shanghai
2007 ICGEB meeting at Cape Town, South Africa 2008. Japanese Society of Plant Physiology, Sapporo (special workshop on the role of keto aldehydes in plants)
2006 CGEB-TWAS meeting on Abiotic stress tolerance, Santiago, Chile
2004 RED-BIO Latin American meeting on Agricultural Biotechnology (at Dominican Republic)
2004 FAO/IAEA meeting on Coordinated Res. Project on Stress Biology, Vienna
2004 UNIDO Global Biotechnology Forum, Concepcion, Chile
2003 UNESCO meeting on GMOs, Paris
2002 IAPTC & B Congress: Plant Biotechnolgy 2002 and Beyond, Florida, USA
2002 Meeting on Biotechnology and its applications, Vanezuela
2001 International Conference on Biotechnology and Society, Genova, Italy
2001 Plant Tissue Culture and Biotechnolgy, Hanoi, Vietnam
2000 Plant Biotechnology meeting, Bulgaria
1999 ICGEB workshop at Beijing, China
1997 IUBS Annual meeting on Biotechnology and Biodiversity, Taipei, Taiwan
1997 International Plant Molecular Biology meeting, Singapore
1997 International Bioinformatics Training course, Weizmann Institute of Science, Israel April 2-10, 1997. (Org. Prof. M. Edelman) At this meeting with the support of UNESCO we developed an International Centre for Cooperation in Bioinformatics and got India included as a partner.
1995 European Photomorphogenesis meeting, Sitges, Barcelona (org. E. Simon)
1992 Biochemical Society (London) Colloquium on Glyoxalase (Org. P.J. Thornally)
1991 Photomorphogenesis Conference, USDA, Beltsville (Org. Bill Vanderwoude)
1989 Symposium on Photomorphogenesis, Freiburg, West Germany(Org.by H. Mohr).
1988 Annual Meeting of American Society of Plant Physiology, Reno, Nevada.
1988 Signal Transduction Workshop: University of Pennsylvania Philadelphia (Org. by A. Cashmore). .
1988 International Conference on Phosphoinositides in Plants. Purdue University, USA. Dr. Ruth Sather invited for on spot discussion and presentation of our work.

- 1987 International Botanical Congress, Berlin.
 1986 XVI Yamada Conference, Okazaki, Japan.(Org. by M.Furuya).
 1982 Annual Meeting of American Society of Plant Physiology University of Illinois, Urbana, USA.
 1978 2nd Arabidopsis meeting, Frankfurt, West Germany.

Other Academic Activities

(A). Research and Teaching

Ph. D. supervision: 35

M.Phil dissertations: 7

Post-doctoral: 25

Teaching experience: M.Sc., M.Phil., Ph.D =30 years

Research Projects undertaken : 27 (got funding from , CSIR, UGC, DST,ICAR, DBT, also got funding to create a Centre for Plant Molecular Biology at JNU), Coordinator Network program on rice abiotic stress, from DBT, 2004-2008

Coordinator, Indo-US program on drought and salinity stress, DBT 2005-2008

Coordinator, Translational Program in Agricultural Biotechnology, DBT 2007-2012

Coordinator: DBT program on plant microRNAs : 2008-2011

Reviewer for papers in over dozen of international journals like, Nature, Plant Journal, Plant Physiology, FEBS.J., J.Expt. Bot., Planta and others

(B) Editorial Board:

- i. Physiology and Molecular Biology of Plants, 1994-1995, 2003-
- ii. Journal of Plant Biochemistry & Biotechnology, 1995.-
- iii. National Science Academy Science Letters 1995-2002
- iv. Plant Physiology and Biochemistry 1997-
- v. Plant Biology 1999-
- vi. Indian Journal of Experimental Biology 2001-2008
- vii. Indian Journal of Biotechnology 2002-
- viii. Phytomorphology. (Int. J. of Plant. Sci)-2007-
- ix. Journal of Food Agriculture and Environment, Finland, 2003-2006
- x. The Journal of National Science Foundation of Sri Lanka. 2005-
- xi. Molecular Plant IF 2.8): Blackwell Scientific Publ. England. 2007-2012
- xii. Member, Consultation Board of IDOSI Journals, Canada 2006-
- xiii. Tree Physiology, Canada (IF 2.5) 2006-2008
- xiv. J. Plant Physiology, Germany (IF 2.4) 2008-
- xv. J. Biomedicine and Biotechnology (Section Pl. Biotech)(2009-

(C)Grant/ Review Panels in National Agencies

(I) Council of Scientific and Industrial Research, India

Plant Agriculture & Forest Committee, 1990-1995

Plant Science Committee, 1998-2001
Travel Grant Committee, 1990-1991
RA/SRF Selection Committee
CSIR-NET, examination committee
Bhatnagar Award Committee
Young Scientist Award Committee
Member, Project Review committee for New Millennium Indian Technology Leadership Initiative Program
Member, Research Council, CIMAP, Lucknow, 2001-2006
Co-chairperson: CSIR Recruitment Board 2003-2011
Member, Research Council, RRL, Jammu, 2004-2006; 2010-2012; 2013-2015
Chairman, Research Council, Institute of Himalayan Bioresource Technology, Palampur; 2004-
Member, Research Council, National Chemicals Laboratory, Pune, 2007-2010
Member Search /Selection Committee for CSIR Director like CCMB/ NBRI/ CIMAP/ IHBT
Member, 12th Plan Committee 2011
Member, Governing Council, 2014
Chairman, Research council, NBRI, Lucknow 2013-
Chairman, Plant Science committee, 2015-

(II) Department of Science and Technology, Govt. of India

MAC for Young Scientist, 1990-1995
PAC for Plant Sciences, 1994-1999
Member, Committee for selection of Swarnajyanti Fellowships, 2000- 2007
Member, PAC, ILTP, Indo Russia and Other Foreign Programs, 2001
Member, FIST program committee, 2002—2007
Member, Committee for BOYSCOST selection 2005-2007
Member, SERC, 2004-2007
Chairman, PAC, Plant Science, 2004-2007

(III) Department of Biotechnology, Govt. of India

PAC 1991-1992
PAC for Human Resources Development, 1997-99
PAC for Patent Screening Committee, 1998-2002
PAC, Agriculture Biotechnology, 2000-2003, 2008
PAC, Bioprospecting and Biodiversity, 2000-2003
Chairman, Overseas fellowship committee, 2000
Member, Indian Delegation DBT to visit China to develop Sino- Indian Collaboration Programmes, 1994
Member from DBT on NBPGR, New Delhi monitoring committee (1999- 2007)
Member from DBT on Rajiv Gandhi Centre, Trivandrum, monitoring committee, 2000-2005
Member on Scientific Advisory Committee of National Centre for Plant Genome, New Delhi (1999- 2006 , 2009-)

Member, Review Committee Genetic Modified Organisms, 2002.
Member, Task Force, Plant Biotechnology, 2003
Member, Working Group on Biosafety Regulations, 2003
Chairman, PAC, Bioprospecting and Biodiversity, 2005-2011
Member, PAC for Centres of Excellence, 2005—2008
Member, Technical Screening Committee of SIBRI 2005—2010
Member, Bioscience National Award Committee, 2005—2010
Member, Basic Science Committee, 2006-2010
Co-Chairman, Agricultural Biotechnology PAC 2006-2010
Co-Chairman, Interdisciplinary Research Committee (IDRC) in Biotechnology, 2006-2010
Member, Committee for selection of Tata Innovative prize and Ramalingaswamy Fellowships, 2007-2010
Member, Bioresource Board, 2007-2012
Chairman, Task Force, Plant Biotechnology 2012-2014
Chairman, RNAi technology task force, 2012-2014
Member, Task Force and Apex Committee, BIRAP,
Co-Chair, Scientific Advisory Committee, NIPGR, 2013-
Chairman, Fast track committee on Agricultural Biotechnology 2010-2013

(IV) University Grants Commission, India

Member, Molecular Biology and Biotechnology Panel
Nominated member, visiting committees to evaluate different Universities
Course Development Committee for Plant Sciences (2001)
Course Development Committee for Biotechnology (2001)
Member, Committee for Formulating the Xth Plan Profile of Higher Education in India(2001)
Member, visiting committee for NEHU
Member, special committee to evaluate Univ. of Hyderabad, Excellence Program

(V) National Science Academies

Member, Biology Committee, INSA1998
Member, Library Acquisition Committee, INSA1998
Representative of INSA 26th Gen. Assembly of IUBS held at Taipei in 1998
Representative to the Royal Society London, 1999, 2000: was member of a team along with the US Academy President and his team, Royal Academy President and his team, Chinese Academy, Brazil Academy, Third World Academy, and Mexican Academy that brought out a document on Transgenic Plants and World Agriculture
Member, Sectional Committee, Indian Academy of Sciences, Bangalore (1993- 1997)
Convenor, Sec. Comm.on Plant/Animal Sciences, Indian Academy of Sciences(2002-),
Member, Section Committee, Indian National Science Academy (1996-1998, 2000, 2001, 2002-2004),
Council Member, of Indian Academy of Sciences (2001 –2003; 2004-2006)
Member, Screening committee for fellows, National Academy of Sciences, Allahabad , 2004-
Vice-president, Indian National Science Academy (INSA) 2004-2006

Member, Inter-Academy committee, INSA, 2004-
Chairman, ICSU, INSA 2004-
Team leader of INSA delegation to Hungary for Cooperative programs, and joint workshops, 2004, 2006
Chairman, Section committee, on Plant Science, INSA, 2008
Member, Screening committee, NAAS, 2009
Member, NAAS Committee to prepare the chapter on “Agricultural Research Preparedness” for the document on State of Indian Agriculture (2009). Released by the Minister of Agriculture.GOI
Member , Int committee on Biosecurity, 2011-

(VI) Member, Board of Studies/ Academic Council

Indore University, 1992
NEHU, Shillong, 1994-
Kurukshetra University, 1989-1991
Banaras Hindu University, 1994-95
Delhi University, 1997-1999
G.J.University, Hissar, 1999-2001, 2004- (AC)
Poorvanchal University 2000-2002
SAC, Bose Institute, Calcutta 2001
Member IGNOU Course Design Committee, Plant Physiology
Member, Academic Committee, National Centre for Plant Genome Research. New Delhi, 2001-2006
Member Governing Board, Netaji Institute of Technology, New Delhi (nominated by Delhi Govt.)2004
Academic Committee, National Institute of Immunology, Delhi, 2004-
Member Governing Board, GB Pant Institute ,Almora 2005-2008
Member Academic Council, Indraprastha University, New Delhi 2008-2010
Member , Planning Board, GGS Indraprastha University, New Delhi, 2015..

(VII) Indian Council of Agricultural Research, India

Member, Working group for formulation of National Syllabus of Genetics and Plant Breeding(2000)
Panel Member, for review of work at IARI, Delhi (2001);
Member of the Board for Biotechnology Research of the Fisheries Institute, Bhubaneswar, Orissa(1998-2000)
Member, Quinquennial Review Team to review work of IARI from 1990 to 2000
Member of ICAR Society (highest body, Chaired by the Minister of Agriculture) 2007-
Member, Research Program Committee of NAIP, ICAR 2009-

(VIII) Ministry of Health

Member, Committee on food safety of GM-foods

(IX) Planning Commission:

Member, Xth plan Working Group on Agricultural Research and Education Constituted by Planning Commission for ICAR(2001

Member, Review committee on Biodiversity and GM crops 2006

Member, Sub-group on Adoption and generation of relevant technologies and their dissemination to the farmers ,2007

Member , sub-group on higher education, 2011

(X) At Jawaharlal Nehru University, Administration work(1973-1997)

- i. **Warden**, 1973-75 (First of the two wardens appointed in JNU)
- ii. **Provost**, 1985-86
- iii. **Member**, Academic Council 1973-1975
- iv. **Member**, Executive council 1995-96.
- v. **Coordinator**, Bioinformatic Centre, 1995-1996.
- vi. **Member**, Finance Committee – 1996
- vii. **Course Coordinator** for Ist & 2nd orientation course (1993, 1994) and Ist and 2nd Refresher (1994, 1996) in Life Sciences at the Academic Staff college, JNU.
- viii. **JNU Member** on the Academic Committee of
 - a. National Institute of Immunology, 1993-94
 - b. Army Cadet College, 1994-97
 - c. NIPGR
 - d. CIMAP
- ix. **Chairman**, Committee for providing Internet and LAN in JNU, 1996
- x. Involved in creating a new **DBT sponsored “Centre for Plant Molecular Biology ”**on campus in collaboration with Prof. Asis Datta, Prof. Sipra Guha-Mukherjee, Prof. K.C.Upadhyaya
- xi. **Secretary and then the President** of JNU Group Housing Society (was requested to take up this task as the earlier committees had not delivered . During the term the , foundation was laid by the first VC of the JNU, Mr G. Parthasarthy, flats were completed and allotments were got done by DDA)
- xii. was elected as Vice-President of JNUTA for one term and school representative for two terms
- xiii. Member of the Standing Committee of AC on JNU Recognized Research Institutions , 2009--2011

(XI) Countries visited abroad for attending international meetings, visiting laboratories and developing bi national programs

USA, Germany, France, Italy, England, Spain, Netherlands, Belgium, Denmark, Sweden, Switzerland, Bulgaria, China, Taiwan, Singapore, Vietnam, Australia, Vanezuela, Nepal, Phillipines, Hongkong, BeloRus, Russia, Chile, Austria, Canada, Hungary, UAE, South Africa, Mexico, Bangladesh, Korea, Turkey