

List of research publications (Aug 2018) - Prakash P. Kumar

ORCID: 0000-0002-0963-1664
SCI Researcher ID: A-6236-2009

Publications in Refereed International Journals

100. Vishal B, Krishnamurthy P, Ramamoorthy R, Kumar PP. *OsTPS8* controls yield-related traits and confers salt stress tolerance in rice by enhancing suberin deposition. **New Phytologist** (2018) 10.1111/nph.15464.
99. Vishal B, Kumar PP. Regulation of seed germination and abiotic stresses by gibberellins and abscisic acid. **Frontiers in Plant Science** (2018) 9:838. doi: 10.3389/fpls.2018.00838
98. Ramamoorthy R, Vishal B, Ramachandran S, Kumar PP. The *OsPSI-F* gene regulates growth and development in rice by modulating photosynthetic electron transport rate. **Plant Cell Reports** 37:377-385 (doi: 10.1007/s00299-017-2235-8) (2018).
97. Ravindran P, Verma V, Stamm P, Kumar PP. A novel RGL2-DOF6 complex contributes to primary seed dormancy in *Arabidopsis thaliana* by regulating a GATA transcription factor. **Molecular Plant** (2017) 10: 1307-1320. <http://dx.doi.org/10.1016/j.molp.2017.09.004>.
96. Krishnamurthy P, Mohanty B, Wijaya E, Lee DY, Lim TM, Lin Q, Xu J, Loh CS, Kumar PP. Transcriptomics analysis of salt stress tolerance in the roots of the mangrove *Avicennia officinalis*. **Scientific Reports** (2017) 7: 10031 (doi: 10.1038/s41598-017-10730-2)
95. Bacon CD, Look SL, Gutiérrez-Pinto N, Antonelli A, Tan HTW, Kumar PP, Saw LG, Dransfield J, Baker WJ. Species limits, geographic distribution, and genetic diversity in *Johannesteijsmannia* H.E.Moore (Arecaceae). **Botanical Journal of the Linnean Society** (2016) 182: 318-347.
94. Verma V, Ravindran P, Kumar PP. Plant hormone-mediated regulation of stress responses. **BMC Plant Biology** (2016), 16:86. doi: 10.1186/s12870-016-0771-y
93. Li J, Zhao Y, Chu H, Wang L, Fu Y, Liu P, Upadhyaya N, Chen C, Mou T, Feng Y, Kumar P, Xu J. The rice *SHOEBOX* gene controls pre-mitotic cell expansion in the root meristem by modulating gibberellin biosynthesis. **PLoS Genetics** (2015) 11(8): e1005464. doi:10.1371/journal.pgen.1005464
92. Tan WK, Ang Y, Lim TK, Lim TM, Kumar PP, Loh CS, Lin Q. Proteome profile of salt gland-rich epidermis extracted from a salt-tolerant tree species. **Electrophoresis** (2015) 36:2473-2481, doi: 10.1002/elps.201500023 2015.
91. Tan WK, Lim TK, Loh CS, Kumar P, Lin Q. Proteomic characterization of the salt gland-enriched tissues of the mangrove tree species *Avicennia officinalis*. **PLoS One** (2015) 10(7): e0133386. doi:10.1371/journal.pone.0133386
90. Verma V, Ramamoorthy R, Kohli A, Kumar PP. Rice research to break yield barriers. **COSMOS - Proc Singapore Natl Acad Sci** (2015) 11:37-54. Doi: 10.1142/S0219607715500032
89. Yaish MW, Kumar PP. Salt tolerance research in date palm tree (*Phoenix dactylifera* L.), past, present and future perspectives. **Frontiers in Plant Science** (2015) 6:348. doi: 10.3389/fpls.2015.00348
88. Sherif S, El-Sharkawy I, Mathur J, Ravindran P, Kumar P, Paliyath G, Jayasankar S. A stable JAZ protein from peach mediates the transition from outcrossing to self-pollination. **BMC Biology** (2015) 13(1) 11, doi: 10.1186/s12915-015-0124-6
87. Verma V, Sivaraman J, Srivastava AK, Sadanandom A, Kumar PP. Destabilization of interaction between cytokinin signaling intermediates AHP1 and ARR4 modulates *Arabidopsis* development. **New Phytologist** (2015) 206: 726–737 doi: 10.1111/nph.13297

86. Bhaskar RV, Mohanty B, Verma V, Wijaya E, Kumar PP. A hormone-responsive C1-domain-containing protein At5g17960 mediates stress response in *Arabidopsis thaliana*. **PLoS One** (2015) 10(1): e0115418. doi:10.1371/journal.pone.0115418
85. Jyothi-Prakash PA, Mohanty B, Wijaya E, Lim TM, Lin Q, Loh CS, Kumar PP. Identification of salt gland-associated genes and characterization of a dehydrin from the salt secretor mangrove *Avicennia officinalis*. **BMC Plant Biology** (2014) 14:291. doi:10.1186/s12870-014-0291-6 948
84. Krishnamurthy P, Tan XF, Lim TK, Lim TM, Kumar PP, Loh CS, Lin Q. Proteomic analysis of plasma membrane and tonoplast from the leaves of a mangrove plant *Avicennia officinalis*. **Proteomics** (2014) 14:2545-2557
83. El-Sharkawy I, Sherif S, Jones B, Mila I, Kumar PP, Bouzayen M, Jayasankar S. TIR1-like auxin-receptors are involved on the regulation of plum fruit development. **Journal of Experimental Botany** (2014) 65:5205-5215 doi: 10.1093/jxb/eru279
82. Krishnamurthy P, Jyothi-Prakash PA, Lin Qin, He J, Lin Q, Loh CS, Kumar PP. Role of root hydrophobic barriers in salt exclusion of a mangrove plant *Avicennia officinalis*. **Plant, Cell & Environment** (2014) 37:1656–1671. DOI: 10.1111/pce.12272
81. Han P, Kumar PP, Ong BL. Remediation of nutrient-rich waters using the terrestrial plant, *Pandanus amaryllifolius* Roxb. **Journal of Environmental Sciences** (2014) 26:404–414
80. El-Sharkawy I, Sherif S, El Kayal W, Mahboob A, Abubaker K, Ravindran P, Jyothi-Prakash PA, Kumar PP, Jayasankar S. Characterization of gibberellin-signalling elements during plum fruit ontogeny defines the essentiality of gibberellin in fruit development. **Plant Molecular Biology** (2013) DOI: 10.1007/s11103-013-0139-8
79. Kohli A, Sreenivasulu N, Lakshmanan P, Kumar PP. The phytohormone crosstalk paradigm takes center stage in understanding how plants respond to abiotic stresses. **Plant Cell Reports** (2013) 32:945-957 DOI: 10.1007/s00299-013-1461-y
78. Kumar PP. Regulation of biotic and abiotic stress responses by plant hormones. **Plant Cell Reports** (2013) 32:943 (Editorial for Special Issue) DOI: 10.1007/s00299-013-1460-z
77. Ramamoorthy R, Phua EK, Lim SH, Tan HTW, Kumar PP. Identification and characterization of *RcMADS1*, an *AGL24* ortholog from the holoparasitic plant *Rafflesia cantleyi* Solms-Laubach (Rafflesiaceae). **PLoS One** (2013) DOI: 10.1371/journal.pone.0067243
76. Kumar PP. Plant hormones and their intricate signaling networks: Unraveling the nexus. **Plant Cell Reports** (2013) 32:731-732. DOI: 10.1007/s00299-013-1435-0
75. Verma V, Sivaraman J, Kumar PP. Expression, purification and characterization of cytokinin signaling intermediates: Arabidopsis Histidine Phosphotransfer Protein 1 (AHP1) and AHP2. **Plant Cell Reports** (2013) 32:795–805. DOI: 10.1007/s00299-013-1424-3
74. Stamm P, Kumar PP. Auxin and gibberellin responsive *Arabidopsis* *SMALL AUXIN UP RNA36* regulates hypocotyl elongation in the light. **Plant Cell Reports** (2013) 32:759–769. DOI 10.1007/s00299-013-1406-5
73. Leonardía AAP, Tan BC, Kumar PP. Genetic diversity among clumps of *Acanthorrhynchium papillatum* as measured by variation in ITS2 sequences. **J Bryology** (2013) 35:255-265.
72. Tan W-K, Lin Q, Lim TM, Kumar PP, Loh CS. Dynamic secretion changes in the salt glands of the mangrove tree species *Avicennia officinalis* in response to a changing saline environment. **Plant, Cell & Environment** (2013) 36:1410-1422. DOI: 10.1111/pce.12068
71. Stamm P, Ravindran P, Mohanty B, Tan EL, Yu H, Kumar PP. Insights into the molecular mechanism of RGL2-mediated inhibition of seed germination in *Arabidopsis thaliana*. **BMC Plant Biology** (2012), 12:179 doi:10.1186/1471-2229-12-179 (<http://www.biomedcentral.com/1471-2229/12/179>).

70. Stamm P, Verma V, Ramamoorthy R, Kumar PP. Manipulation of plant architecture to enhance lignocellulosic biomass. **AoB Plants** (2012) DOI: 10.1093/aobpla/pls026.
69. Ramamoorthy R, Kumar PP. A simplified protocol for genetic transformation of switchgrass (*Panicum virgatum* L.). **Plant Cell Reports** (2012) 31:1923-1931. DOI: 10.1007/s00299-012-1305-1
68. Leonardía AAP, Tan BC, Kumar PP. Population genetic structure of the tropical moss *Acanthorrhynchium papillatum* as measured by microsatellite markers. **Plant Biology** (2012) 15:384-394. DOI: 10.1111/j.1438-8677.2012.00640.x
67. Lee LYC, Hou XL, Fang L, Fan, SG, Kumar PP, Yu H. STUNTED mediates the control of cell proliferation by GA in *Arabidopsis*. **Development** (2012) 139: 1568-1576 DOI: 10.1242/dev.079426
66. Kumar PP, Turner IM, Rao AN, Arumuganathan K. Estimation of nuclear DNA content of various bamboo and rattan species. **Plant Biotechnology Reports** (2011) 5:317-322.
65. El-kereamy A, El-sharkawy I, Ramamoorthy R, Taheri A, Errampalli D, Kumar PP, Jayasankar S. *Prunus domestica* Pathogenesis-Related Protein-5 activates the defense response pathway and enhances the resistance to fungal infection. **PLoS One** (2011) 6(3):1-11; e17973 (Open Access).
64. Stamm P, Ramamoorthy R, Kumar PP. Feeding the extra billions: Strategies to improve crops and enhance future food security. **Plant Biotechnology Reports** (2011) 5: 107-120, DOI: 10.1007/s11816-011-0169-0
63. Chatrath S, Chapeaurouge A, Lin Q, Lim TK, Dunstan N, Mirtschin P, Kumar PP, Kini RM. Identification of novel proteins from the venom of a cryptic snake *Drysdalia coronoides* by a combined transcriptomics and proteomics approach. **Journal of Proteome Research** (2011) 10:739–750.
62. Stamm P, Kumar PP. The phytohormone signal network regulating elongation growth during shade avoidance. **Journal of Experimental Botany** (2010) 61:2889-2903.
61. Godge MR, Kumar BD, Kumar PP. *Arabidopsis HOG1* gene and its petunia homolog *PETCBP* act as key regulators of yield parameters. **Plant Cell Reports** (2008) 27:1497-1507.
60. Murthy UMN, Kumar PP, Sun WQ. Change in glass transition temperature upon priming of *Impatiens walleriana* seeds does not explain their reduced longevity. **Seed Science & Technology** (2008) 36:388-395.
59. Liu C, Chen H, Er HL, Soo HM, Kumar PP, Han JH, Liou YC, Yu H. Direct interaction of AGL24 and SOC1 integrates flowering signals in *Arabidopsis*. **Development** (2008) 135:1481-1491.
58. Rajagopalan N, Pung YF, Zhu YZ, Wong PTH, Kumar PP, Kini RM. β -Cardiotoxin: A new three-finger toxin from *Ophiophagus hannah* (king cobra) venom with beta-blocker activity. **FASEB Journal** (2007) 21:3685-3695.
57. Nair DG, Fry BG, Alewood P, Kumar PP, Kini RM. Antimicrobial activity of omwaprin, a new member of waprins family of snake venom proteins. **Biochemical Journal** (2007) 402:93-104.
56. Wang Y, Kumar PP. Characterization of two ethylene receptors *PhERS1* and *PhETR2* from petunia: *PhETR2* regulates timing of anther dehiscence. **Journal of Experimental Botany** (2007) 58:533-544.
55. Xu Y, Teo LL, Zhou J, Kumar PP, Yu H. Floral organ identity genes in the orchid *Dendrobium crumenatum*. **The Plant Journal** (2006) 46:54-68.
54. Pung YF, Kumar SV, Rajagopalan N, Fry BG, Kumar PP, Kini RM. Ohanin, a novel protein from king cobra venom: Its cDNA and genomic organization. **Gene** (2006) 371:246-256.
53. Leonardia AAP, Kumar PP, Tan BC. Development of microsatellite markers for the tropical moss, *Acanthorrhynchium papillatum* **Molecular Ecology Notes** (2006) 6: 396–398.

52. Pung YF, Wong PTH, Kumar PP, Hodgson WC, Kini RM. Ohanin, a novel protein from king cobra venom induces hypolocomotion and hyperalgesia in mice. **Journal of Biological Chemistry, USA** (2005) 280:13137-13147.
51. Goh MWK, Kumar PP, Lim SH, Tan HTW. Random Amplified Polymorphic DNA analysis of the moth orchids, *Phalaenopsis* (Epidendroideae: Orchidaceae). **Euphytica** – (2005) 141:11–22.
50. Yu H, Ito T, Zhao Y, Peng J, Kumar PP, Meyerowitz EM. Floral homeotic genes are targets of gibberellin signaling in flower development. **Proceedings of the National Academy of Sciences, USA** (2004) 101:7827-7832.
49. Wagner D, Wellmer F, Dilks K, William D, Smith MR, Kumar PP, Riechmann JL, Greenland AJ, Meyerowitz EM. Floral induction in tissue culture: a system for the analysis of LEAFY-dependent gene regulation. **The Plant Journal** (2004) 39:273-282.
48. Zhang P, Pwee KH, Tan HT, Kumar PP. Conservation of class C function of floral organ development during 300 million years of evolution from gymnosperms to angiosperms. **The Plant Journal** (2004) 37:566-577.
47. Wang Y, Kumar PP. Heterologous expression of *Arabidopsis ERS1* causes delayed senescence in coriander. **Plant Cell Reports** (2004) 22:678–683.
46. Yu H, Kumar PP. Posttranscriptional gene silencing in plants by RNA (Invited Review Article). **Plant Cell Reports** (2003) 22:167-174.
45. Wu Q, Zhang W, Pwee KH, Kumar PP. Cloning and characterization of rice HMGB1 gene. **Gene** (2003) 312:103-109.
44. Prakash AP, Kush A, Lakshmanan P, Kumar PP. Cytosine methylation occurs in a CDC48 homologue and a MADS-box gene during adventitious shoot induction in *Petunia* leaf explants. **Journal of Experimental Botany** (2003) 54:1361-1371.
43. Wu Q, Zhang W, Pwee KH, Kumar PP. Rice HMGB1 protein recognizes DNA structures and bends DNA efficiently. **Archives of Biochemistry and Biophysics** (2003) 411:105-111.
42. Yu H, Xu Y, Tan EL, Kumar PP. AGAMOUS-LIKE 24, a dosage-dependent mediator of the flowering signals. **Proceedings of the National Academy of Sciences, USA** (2002) 99:16336-16341.
41. Narayana Murthy UM, Kumar PP, Sun WQ. Mechanisms of Seed Aging under Different Storage Conditions: Lipid Peroxidation, Sugar Hydrolysis, Maillard Reactions and Their Relationship to Glass State Transition. **Journal of Experimental Botany** (2003) 54:1057-1067.
40. Zhang P, Pwee KH, Tan HT, Kumar PP. Cloning and characterization of *Fortune-1*, a novel gene with enhanced expression in male reproductive organs of *Cycas edentata*. **Mechanisms of Development** (2002) 114:149-152.
39. Narayana Murthy UM, Liang Y, Kumar PP, Sun WQ. Non-enzymatic protein modification by Maillard reaction reduces the activities of scavenging enzymes in *Vigna radiata*. **Physiologia Plantarum** (2002) 115:213-220.
38. Prakash AP, Kumar PP. *PkMADS1* is a novel MADS-box gene regulating adventitious shoot induction and vegetative shoot development in *Paulownia kawakamii*. **The Plant Journal** (2002) 29:141-151.
37. Low RK, Prakash AP, Swarup S, Goh CJ, Kumar PP. A differentially expressed bZIP gene is associated with adventitious shoot regeneration in leaf cultures of *Paulownia kawakamii*. **Plant Cell Reports** (2001) 20:696-700.

36. Low RK, Prakash AP, Swarup S, Goh CJ, Kumar PP. Lambda exonuclease-based subtractive hybridization approach to isolate differentially expressed genes from leaf cultures of *Paulownia kawakamii*. **Analytical Biochemistry** (2001) 295:240-247.
35. Teo W, Kumar PP, Goh CJ and Swarup S. The expression of *Brostm*, a KNOTTED1-like gene, marks the cell type and timing of in vitro shoot induction in *Brassica oleracea*. **Plant Molecular Biology** (2001) 46:567-580.
34. Loo, AHB, Tan, HTW, Kumar PP and Saw LG. Intraspecific variation of *Licuala glabra* Griff. (Palmae) in Peninsular Malaysia - a morphometric analysis. **Biological Journal of The Linnean Society** (2001) 72:115-128.
33. Tay BS, Ong BL and Kumar PP. Effect of varying CO₂ and light levels on growth of *Hedyotis* and sugarcane shoot cultures. **In Vitro Cellular and Developmental Biology-Plant** (2000) - 36:118-124.
32. Loo AHB, Tan HTW, Kumar PP and Saw LG. Population analysis of *Licuala glabra* Griff. var. *glabra* using RAPD profiling. **Annals of Botany** (1999) 84:421-427.
31. Rajaseger G, Tan HTW, Turner IM, Saw LG and Kumar PP. Analysis of Peninsular Malaysian *Ixora* species and selected populations and mutants by RAPD. **Annals of Botany** (1999) 84:253-257.
30. Kumar PP, Rao CD, Rajaseger G and Rao AN. Seed surface architecture and random amplified polymorphic DNA profiles of *Paulownia fortunei*, *P. tomentosa* and their hybrid. **Annals of Botany** (1999) 83:103-107.
29. Kumar PP, Rao CD and Goh CJ. The influence of petiole and lamina on adventitious shoot initiation from leaf explants of *Paulownia fortunei*. **Plant Cell Reports** (1998) 17:886-890.
28. Kumar PP, Lakshmanan P and Thorpe TA. Regulation of morphogenesis in plant tissue culture by ethylene. **In Vitro Cellular and Developmental Biology-Plant** (1998) 34:94-103.
27. Rath P, Rajaseger G, Goh CJ and Kumar PP. Genetic analysis of Dipterocarps using Random Amplified Polymorphic DNA markers. **Annals of Botany** (1998) 82:61-65.
26. Kumar PP, Yau JCK and Goh CJ. Genetic analyses of *Heliconia* species and cultivars with RAPD markers. **Journal of the American Society for Horticultural Science** (1998) 123:91-97.
25. Teo W, Lakshmanan P, Kumar PP, Goh CJ and Swarup S. Direct shoot formation and plant regeneration from cotyledon explants of rapid-cycling *Brassica rapa*. **In Vitro Cellular and Developmental Biology-Plant** (1997) 33:288-292.
24. Rajaseger G, Tan HTW, Turner IM and Kumar PP. Analysis of genetic diversity among *Ixora* cultivars (Rubiaceae) using Random Amplified Polymorphic DNA. **Annals of Botany** (1997) 80:355-361.
23. Kwa SH, Wee YC and Kumar PP. Ribulose-1,5-bisphosphate carboxylase and phosphoenolpyruvate carboxylase activities of photoautotrophic callus of *Platyserium coronarium* (Koenig ex O.F. Muell.) Desv. under CO₂ enrichment. **Plant Cell Tissue and Organ Culture** (1997) 50:75-82.
22. Prakash AP and Kumar PP. Inhibition of shoot induction by 5-azacytidine and 5-aza-2'-deoxycytidine in *Petunia* involves DNA hypomethylation. **Plant Cell Reports** (1997) 16:719-724.
21. Kwa SH, Wee YC, Lim TM and Kumar PP. Morphogenetic plasticity of callus reinitiated from cell suspension cultures of the fern *Platyserium coronarium*. **Plant Cell Tissue and Organ Culture** (1997) 48:37-44.
20. Rao CD, Goh CJ and Kumar PP. High frequency adventitious shoot regeneration from excised leaves of *Paulownia* spp. cultured in vitro. **Plant Cell Reports** (1996) 16:204-209.

19. Kumar PP, Rao CD and Goh CJ. Ethylene and CO₂ affect direct shoot regeneration from the petiolar ends of *Paulownia kawakamii* leaves cultured in vitro. **Plant Growth Regulation** (1996) 20:237-243.
18. Jia SR, Kumar PP and Kush A. Oxidative stress in *Agrobacterium*-induced tumors on *Kalanchoe* plants. **The Plant Journal** (1996) 10:545-551.
17. Kumar PP, Nathan MJ and Goh CJ. Involvement of ethylene on growth and plant regeneration in callus cultures of *Heliconia psittacorum* L.f. **Plant Growth Regulation** (1996) 19:145-151.
16. Goh CJ, Kumar PP and Yau CK. Genetic variations detected with RAPD markers in *Heliconia*. **Acta Horticulturae** (1995) 420:72-74.
15. Kwa SH, Wee YC and Kumar PP. Role of ethylene in the production of sporophytes from *Platyserium coronarium* (Koenig) Desv. frond and rhizome pieces cultured in vitro. **Journal of Plant Growth Regulation** (1995) 14:183-189.
14. Kwa SH, Wee YC and Kumar PP. Ammonium and nitrate uptake and nitrate reductase activity of photoautotrophic callus cultures of the fern *Platyserium coronarium* (Koenig) Desv. **In Vitro Cellular and Developmental Biology-Plant** (1995) 31:211-214.
13. Kwa SH, Wee YC, Lim TM and Kumar PP. Establishment and physiological analyses of photoautotrophic callus cultures of the fern *Platyserium coronarium* (Koenig) Desv. under CO₂ enrichment. **Journal of Experimental Botany** (1995) 46:1535-1542.
12. Kwa SH, Wee YC, Lim TM and Kumar PP. IAA-induced apogamy in *Platyserium coronarium* (Koenig) Desv. gametophytes cultured *in vitro*. **Plant Cell Reports** (1995) 14:598-602.
11. Goh CJ, Nathan MJ and Kumar PP. Direct organogenesis and induction of morphogenic callus through thin section culture of *Heliconia psittacorum*. **Scientia Horticulturae** (1995) 62:113-120.
10. Nathan MJ, Kumar PP and Goh CJ. High frequency plant regeneration in *Heliconia psittacorum* L.f. **Plant Science** (1993) 90:63-71.
9. Rao CD, Goh CJ and Kumar PP. High frequency plant regeneration from excised leaves of *Paulownia fortunei*. **In Vitro Cellular and Developmental Biology-Plant** (1993) 29P:72-76.
8. Nathan MJ, Goh CJ and Kumar PP. In vitro propagation of *Heliconia psittacorum* by bud culture. **HortScience** (1992) 27:450-452.
7. Kumar PP and Thorpe TA. A setup for incubating plant cultures under continuous flow of gases. **In Vitro Cellular and Developmental Biology-Plant** (1991) 27P:43-44.
6. Joy IV RW, Kumar PP and Thorpe TA. Long-term storage of somatic embryogenic white spruce tissue at ambient temperature. **Plant Cell Tissue and Organ Culture** (1991) 25:53-60.
5. Kumar PP, Joy IV RW and Thorpe TA. Ethylene and carbon dioxide accumulation and growth of cell suspension cultures of white spruce (*Picea glauca*). **Journal of Plant Physiology** (1989) 135:592-596.
4. Kumar PP and Thorpe TA. Polyamine metabolism in excised cotyledons of *Pinus radiata* cultured in vitro. **Physiologia Plantarum** (1989) 76:521-526.
3. Kumar PP, Bender L and Thorpe TA. Activities of ribulose biphosphate carboxylase and phosphoenolpyruvate carboxylase and ¹⁴C-bicarbonate fixation during in vitro culture of *Pinus radiata* cotyledons. **Plant Physiology** (1988) 87:675-679.
2. Kumar PP, Reid DM and Thorpe TA. The role of ethylene and carbon dioxide in differentiation of shoot buds in excised cotyledons of *Pinus radiata* in vitro. **Physiologia Plantarum** (1987) 69:244-252.

1. Kumar PP, Raju CR, Chandramohan M and Iyer RD. Induction and maintenance of friable callus from the cellular endosperm of *Cocos nucifera* L. **Plant Science** (1985) 40:203-207.

Publications in Refereed Regional Journals

1. Raju CR, Kumar PP, Chandramohan M and Iyer RD. Coconut plantlets from leaf tissue cultures. **Journal of Plantation Crops, India** (1984) 12:75-78.
2. Turner IM, Tan HTW, Kumar PP, Chua KS, Samsuri BA. The vegetation of Pulau Sibul, Johore. **Malayan Nature Journal, Malaysia** (1993) 46:169-188.

Coauthored book

1. Taji A, Kumar PP and Lakshmanan P. **In Vitro Plant Breeding**. Haworth Press, Inc., USA. (2002). ISBN 1-56022-907-1 (*The chapters were written by the three authors*).

Guest Editor; Special Issues of Journal:

1. **Special issue: Plant Hormone Signaling (Volume I) for Plant Cell Reports:** year of publication 2013; Volume number 32; issue number: 6; Publication cover date: 01 June 2013
2. **Special issue: Plant Hormone Signaling (Volume II) for Plant Cell Reports:** year of publication 2013; Volume number 32; issue number: 7; Publication cover date: 01 July 2013

Chapters in edited books

1. Thorpe TA and Kumar PP. Recent advances in plant micropropagation with particular reference to tropical species. - In: Proceedings Farm-Tech '85 Seminar: Modern Technology for Jamaican Agriculture, Kingston, Jamaica, W.I., Jan 27-31, 1985 - LA Wilson (Ed.) (1989) pp 67 - 95. Dept of Agric. Extension, UWI, St. Augustine, Trinidad and Tobago.
2. Kumar PP and Thorpe TA. Alteration of growth and morphogenesis by endogenous ethylene and carbon dioxide in conifer tissue cultures. -In: Applications of Biotechnology in Forestry and Horticulture - V Dhawan (Ed.) (1988) pp 205 - 214. Plenum Publishers, New York, USA.
3. Thorpe TA and Kumar PP. Cellular control of morphogenesis. -In: Micropropagation of Woody Plants - MR Ahuja (Ed.) (1990) pp 11 - 29. Kluwer Academic Publishers, Dordrecht, The Netherlands.
4. Thorpe TA, Harry IS and Kumar PP. Application of micropropagation to forestry. -In: Micropropagation: Technology and Application - PC Debergh and RH Zimmerman (Eds.) (1991) pp 311 - 336. Kluwer Academic Publishers, Dordrecht, The Netherlands.
5. Kumar PP and Thorpe TA. Use of tissue culture in tree physiology. - In: Physiology of Trees - AS Raghavendra (Ed.). (1991) pp 445 - 465. John Wiley & Sons, Inc., New York, USA.
6. Kumar PP, Loh CS. 2011. Plant Tissue Culture for Biotechnology. In: Plant Biotechnology and Agriculture. Altman A, Hasegawa PM (Ed.) (2011) pp. 131 – 138. Oxford: Academic Press.

7. Ramamoorthy R and Kumar PP. Molecular genetic strategies for enhancing plant biomass for cellulosic ethanol production. In: Biomass Conversion: The Interface of Biotechnology, Chemistry and Materials Science. Baskar C, Baskar S, Dhillon RS (Eds.) (2012) pp. 237 - 250. Springer, Germany, New York and Japan.
8. Krishnamurthy P, Lin Q, Kumar PP. Proteomics perspectives in post-genomic era for producing salinity stress-tolerant crops, In: Salinity Responses and Tolerance in Plants Volume 2 - Kumar V. et al. (Eds) (2018) pp 239-266. Elsevier.

Invited seminars presented at international conferences

1. Kumar PP, Reid DM and Thorpe TA. 1986. Ethylene and carbon dioxide accumulation and morphogenesis in excised cotyledons of *Pinus radiata*. -6th International Congress of Plant Tissue and Cell Culture, Minneapolis, Minnesota, USA. August 3-8, 1986. Abstract p.11.
2. Kumar PP, Reid DM and Thorpe TA. 1987. Ethylene and carbon dioxide accumulation in the headspace and shoot bud differentiation in excised cotyledons of radiata pine. -Tissue Culture Association: 38th Annual Meeting, Washington D.C., May 27 - 30, 1987.
3. Kumar PP and Thorpe TA. 1988. Alteration of morphogenesis in conifer tissue cultures by endogenously produced CO₂ and ethylene. - International Conifer Tissue Culture Work Group – 4th meeting, Saskatoon, Saskatchewan, Canada, August 8 - 12, 1988.
4. Kumar PP, Rao CD and Goh CJ. 1993. Analysis of gene expression associated with organogenesis in excised leaves of *Paulownia fortunei* cultured in vitro. In: Physiological and molecular Aspects of Plant Growth and Differentiation, pp 106-115. - JSPS-NUS Seminar, Univ. of Tsukuba, Tsukuba, Japan, 23-25 August 1993.
5. Kumar PP, Nathan MJ and Goh CJ. 1993. Physiological and developmental studies on tissue cultures of *Heliconia psittacorum* L.f. pp 530 (Abstract) In: XV International Botanical Congress, Yokohama, Japan, 28 Aug. - 03 Sept. 1993.
6. Goh CJ, Kumar PP and Yau JCK. 1995. Genetic variations detected with RAPD markers in *Heliconia*. Proceedings of XVIII Eucarpia Symposium - Section Ornamentals. Ornamental Plant Improvement - Classical and Molecular Approaches. Tel Aviv, Israel, 05-09 March 1995.
7. Kumar PP and Prakash AP. 2000. A novel MADS-box gene is required for shoot bud induction in excised leaf cultures of *Paulownia kawakamii*. Presented at the 2000 World Congress on In Vitro Biology, June 10-15, 2000, San Diego, CA, USA.
8. Kumar PP, Prakash AP and Kumar BD. 2000. Gene expression associated with organogenesis in vitro. Presented at the Asia Pacific Conference on Plant Tissue Culture & Agribiotechnology, held in Singapore (19th to 23rd November, 2000). Abstract number A9, pp 11.
9. Kumar BD, Ranganathan S and Kumar PP. The structure of a plant S-adenosylhomocysteine hydrolase protein that acts as a cytokinin binding protein in petunia. Presented at the International Symposium on Structural Biology, Proteomics, Protein Folding and Design (27-29 November 2000), Singapore.
10. Kumar PP, Kumar B.D. and Ranganathan S. 2002. Antisense suppression of a cytokinin-binding protein from petunia causes excessive branching and reduces adventitious shoot bud induction in vitro. Oral Presentation at the International Association of Plant Tissue Culture & Biotechnology Congress, Orlando, Florida (23rd to 28th June 2002). Abstract number S-34 (proceedings to be published).
11. Kumar PP. 2003. Gene expression associated with organogenesis in plant tissue cultures. Presented as a keynote address at the Frontiers of Basic & Applied Molecular Biology, University of Calcutta, India, January 9 to 11, 2003.

12. Zhang P, Pwee KH, Tan HT, Kumar PP. 2004. Reproductive organ development in *Arabidopsis* and *Cycas*: Conservation of *AGAMOUS* gene function during 300 million years of evolution. Presented as a keynote address at the National Tissue Culture Association meeting, St. Aloysius College, Mangalore, India, January 15-17, 2004.
13. Kumar PP. 2004. Gene expression associated with organogenesis. Co-chair of a special symposium and invited speaker at the Society for In Vitro Biology meeting, in San Francisco. Symposium title: Organogenesis In Vitro. (May 22 to 25, 2004, San Francisco, CA, USA).
14. Kumar PP. 2004. Gene expression associated with organogenesis. Invited talk at the symposium of Korean Society of Plant Resources, 29th October, 2004.
15. Kumar PP. 2005. Crop improvement – the biotechnology option. Invited talk at the 2005 Spring Meeting, Korean Society for Plant Biotechnology, Daejeon, South Korea, 22-23 April 2005.
16. Xu Y, Yu H, Kumar PP. Characterization of floral organ identity genes of the orchid *Dendrobium crumenatum*. Invited keynote talk at the Asia Pacific Conference on Plant Tissue Culture and Agribiotechnology, 2007, Kuala Lumpur, Malaysia June 18 - 21, 2007.
17. Kumar PP. Biotechnological improvements of crop plants. Invited talk at the International Conference on 'Developments in Biotechnology', Stella Maris College, Chennai, India, 08 Jan 2008.
18. Kumar PP. 2008. Modification of hormone signaling for improvement of plants. – Keynote address - Presented on 25th Aug 2008 at the 6th International Society for Horticultural Science Conference, Brisbane, Australia, Aug 24 to 28th, 2008.
19. Kumar PP. 2009. Crop improvement by modification of plant hormone signaling pathways. – Plenary talk - Presented on 9th Jan 2009 at the Conference on "Future of Food Biotechnology in India" - January 8-9, 2009. National Institute of Technology, Durgapur, India.
20. VijayBhaskar R., Ramamoorthy R., Godge MR, Kumar PP. Brittle phenotype conferred by overexpression of *AtHOG1* gene in rice. Invited talk at the 6th International Rice Genetics Symposium, Manila Hotel, Manila, Philippines, 16-19 November 2009.
21. Kumar PP. Molecular genetic strategies for enhancing plant biomass for cellulosic ethanol production. Invited talk at the Keystone Biofuels Symposium, Singapore, 04 March 2011.
22. Kumar PP. Strategies for altering plant architecture. NUS-IISc bilateral meeting – 8th and 9th April 2011.
23. Kumar PP. Molecular genetic strategies for enhancing plant biomass and yield. Invited talk at the International Symposium on Plant Biotechnology (ISPB-2011), BIT Mesra, India – 28th Sept to 01st Oct 2011.
24. Kumar PP. Fuel from plants: cellulosic ethanol. Invited talk at the International Symposium on Current Scenario of Biofuels Technologies, Nitte University, India, 20 December 2011.
25. Stamm P, Ravindran P, Mohanty B, Tan EL, Yu H, Kumar PP. Gibberellin signaling: Insights into the molecular mechanism of RGL2-mediated inhibition of seed germination. Talk at the Plant Biology Congress, Freiburg, Germany 29 July to 03 August 2012.
26. Verma V, Oruganti V, Anand GS, Sivaraman J, Kumar PP. Interaction studies of cytokinin signaling proteins AHP1 and ARR4. - Keynote address - at III International Symposium: Intracellular signaling and bioactive molecules design. L'viv, Ukraine, 17 to 23 September 2012.
27. Kumar PP. Regulation of beneficial traits by manipulation of plant hormone signaling intermediates. – Keynote address – at Agtech Global Summit-2012. Jalna, India, 9 to 13 December, 2012. (Jointly organized by Bejo Sheetal Bio-Science Foundation, and Maryland India Business Round Table, USA in collaboration with Michigan State University, USA and Mahatma Phule Krishi Vidhyapeeth Rahuri, India).

28. Kumar PP. Biotechnology research related to agriculture, healthcare and environment. -Keynote address – December 27, 2012- at the conference: “Recent Advances and Challenges in Biotechnology” December 26th to 29th 2012 Nitte University, Nitte, Karnataka State, India.
29. Krishnamurthy P, Pavithra AJ, Lim TK, Tan WK, Lim TM, Lin Q, Loh CA and Kumar PP. Life in a pickle: Adaptation of mangroves to grow in high salt environment - salt exclusion and secretion in *Avicennia officinalis*.- Contributed talk delivered on December 27, 2012 - at the conference: “Recent Advances and Challenges in Biotechnology” December 26th to 29th 2012 Nitte University, India.
30. Kumar PP. Invited talk at the “International Conference on Conservation Strategies of Bioresources”, PSGR Krishnammal College for Women, Coimbatore, India. – February 05-06, 2013.
31. Kumar PP. Regulation of plant growth and development: Molecular genetics of phytohormone action. - Invited talk. Sultan Qaboos University, Muscat, Oman. – February 10-12, 2013.
32. Kumar PP. Rice for the Future: Strategies to develop sustainable rice production.- Invited talk. at 'Genetics and Genomics of Global Health and Sustainability' Singapore from 13 – 18 April 2013 (at The Sands Expo and Convention Center, Marina Bay Sands, Singapore). Organized by the Human Genome Organisation (HUGO) and the International Genetics Federation (IGF).
33. Ramamoorthy R, Rai A, Ramachandran S, Kumar PP. Use of metabolomics to characterize a dwarf mutant line of rice.- Invited talk at ‘2013 In Vitro Biology Meeting’, Providence, Rhode Island, USA. - June 15-19, 2013. Organized by the Society for In Vitro Biology, USA.
34. Krishnamurthy P, Pavithra AJ, Mohanty B, Lin QS, Loh CS, Kumar PP. Transcriptome sequencing of a mangrove plant. Invited talk at ‘Next Generation Sequencing Asia’, Singapore, October 8, 2013.
35. Ramamoorthy R, Rai A, Ramachandran S, Swarup S, Kumar PP. Characterization of a dwarf mutant line of rice using metabolomics. Invited talk at the 1st ASEAN Universities Workshop on Agri-Biotechnology, Department of Biological Sciences, National University of Singapore, Singapore, 21 Oct 2013.
36. Krishnamurthy P, Jyothi-Prakash PA, Mohanty B, Wijaya E, Tan WK, Lin Q, Lim TM, Loh CS, Kumar PP. Transcriptome sequencing of a mangrove plant *Avicennia*. Invited talk at the International Conference: “Next Generation Genomic View on Plants, Animals and Microbes” TLL Singapore, 05-07 March 2014.
37. Ramamoorthy R, Rai A, Ramachandran S, Swarup S, Kumar PP. Isolation of a rice mutant with altered shoot architecture and use of metabolomics for gene function discovery. Invited talk at the International Association for Plant Biotechnology (IAPB) Conference, Melbourne, Australia, 10-15 Aug 2014.
38. Ramamoorthy R, Rai A, Ramachandran S, Swarup S, Kumar PP. Use of metabolomics for gene function discovery in a dwarf rice mutant. Invited talk at the Merlion Metabolomics Workshop Singapore 2014, 19-21 Nov 2014.
39. Kumar PP. Differential RNA sequence analysis: Response of mangrove tree roots to salt treatment. Invited Talk at the 5th Next Generation Sequencing Asia Congress and 3rd Single Cell Analysis Asia Congress, October 14, 2015, Singapore.
40. Ramamoorthy R, Vishal B, Ramachandran S, Kumar PP. Characterization of PHOTOSYSTEM 1 SUBUNIT F gene using a Ds-insertion mutant line of rice. Poster presentation at 11th International Congress of Plant Molecular Biology, Iguazú Falls, Brazil, October, 2015.
41. Kumar PP. Relevance of Biotechnological Applications for Global Food Security and Sustainability. Plenary Talk at the 3rd Regional Conference on Biosensor, Biodiagnostics, Biochips and Biotechnology 2016, AIMST University, Malaysia, April 2016
42. Ravindran P, Verma V, Stamm P and Kumar PP. How does the gibberellin signaling DELLA protein regulate primary seed dormancy? Invited talk at Intl Conf on Plant Dev Biol and Natl Arabidopsis meeting 2017 (ICPDB 2017), NISER, Bhubaneswar, India, 12-16 December 2017.

43. Krishnamurthy P, Ho WJ, Lok CJF, Lee F, Loh CS and Kumar PP. The molecular mechanism behind hydrophobic barrier formation to confer salt tolerance in plants. Invited talk at the 2017 In Vitro Biology Meeting, Raleigh, NC, USA, June 10-14, 2017.
44. Krishnamurthy P, Ho WJ, Lok CJF, Lee F, Loh CS and Kumar PP. RNAseq analysis reveals a molecular regulatory module of how desalination barriers are established in plant roots. Opening talk at the Genomics Analysis and Technology Conference (GATC) 2018, 8-9 January 2018, Guwahati, Assam, India
45. Kumar PP (With Wang Lili, Pannaga Krishnamurthy, QS Lin and CS Loh). Learning from Nature: Producing synthetic biomimetic membrane with water transporter protein from salt tolerant mangrove trees. Invited talk at Fourth International Symposium on Advances in Sustainable Polymers from January 8-11, 2018, IIT Guwahati, India.
46. Krishnamurthy P, Ho WJ, Lok CJF, Lee F, Loh CS and Kumar PP. RNAseq analysis reveals a molecular regulatory module of how desalination barriers are established in the roots of mangrove trees. Invited talk at 5th Plant Genomics & Gene Editing Congress Asia 26 March 2018 Bangkok, Thailand.
47. Ravindran P, Verma V, Stamm P and Kumar PP. Molecular mode of action of RGL2, a gibberellin signaling DELLA protein. Invited talk at the 2018 In Vitro Biology Meeting, SIVB, St. Louis, MO, USA 02 to 06 June 2018.
48. Kumar PP (With Ramamoorthy R, Bhal A). Plant hormones and regeneration: Moving from spray-and-pray approach towards understanding the molecular regulatory pathways. Keynote Lecture at International Association for Plant Biotechnology (IAPB) Meeting, 19-24 Aug 2018, Dublin, Ireland.
49. Krishnamurthy P, Ho WJ, Lok FCJ, Lee F, Loh CS, Kumar PP. A molecular regulatory module for establishing desalination barriers in mangrove plant roots. Keynote Lecture at the Plant responses to light and stress – Workshop, 10-12 October 2018, ICGEB, New Delhi, India.
50. Kumar PP. Molecular genetic enhancement of rice yield and resilience. 5th International Rice Congress 2018, 14-17 Oct 2018, Singapore.

Prakash Kumar, Ph.D.

Professor; Department of Biological Sciences; National University of Singapore
10 Science Drive 4; Singapore 117543

www.dbs.nus.edu.sg/staff/Kumar.htm