

# Avtar K Handa

## List of Publications by Year in descending order

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102  
papers

8,486  
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61687

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128  
docs citations

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times ranked

7611  
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#	ARTICLE	IF	CITATIONS
1	Plant Transcriptome Reprograming and Bacterial Extracellular Metabolites Underlying Tomato Drought Resistance Triggered by a Beneficial Soil Bacteria. <i>Metabolites</i> , 2021, 11, 369.	1.3	23
2	Differential Association of Free, Conjugated, and Bound Forms of Polyamines and Transcript Abundance of Their Biosynthetic and Catabolic Genes During Drought/Salinity Stress in Tomato ( <i>Solanum lycopersicum</i> L.) Leaves. <i>Frontiers in Plant Science</i> , 2021, 12, 743568.	1.7	8
3	Polyamines and Their Biosynthesis/Catabolism Genes Are Differentially Modulated in Response to Heat Versus Cold Stress in Tomato Leaves ( <i>Solanum lycopersicum</i> L.). <i>Cells</i> , 2020, 9, 1749.	1.8	29
4	Engineered Ripening-Specific Accumulation of Polyamines Spermidine and Spermine in Tomato Fruit Upregulates Clustered C/D Box snoRNA Gene Transcripts in Concert with Ribosomal RNA Biogenesis in the Red Ripe Fruit. <i>Plants</i> , 2020, 9, 1710.	1.6	5
5	Fruit Architecture in Polyamine-Rich Tomato Germplasm Is Determined via a Medley of Cell Cycle, Cell Expansion, and Fruit Shape Genes. <i>Plants</i> , 2019, 8, 387.	1.6	14
6	Nexus Between Spermidine and Floral Organ Identity and Fruit/Seed Set in Tomato. <i>Frontiers in Plant Science</i> , 2019, 10, 1033.	1.7	12
7	Transcript Abundance Patterns of 9- and 13-Lipoxygenase Subfamily Gene Members in Response to Abiotic Stresses (Heat, Cold, Drought or Salt) in Tomato ( <i>Solanum lycopersicum</i> L.) Highlights Member-Specific Dynamics Relevant to Each Stress. <i>Genes</i> , 2019, 10, 683.	1.0	40
8	Critical function of DNA methyltransferase 1 in tomato development and regulation of the DNA methylome and transcriptome. <i>Journal of Integrative Plant Biology</i> , 2019, 61, 1224-1242.	4.1	49
9	Application of Hexanal-containing Compositions and Its Effect on Shelf-life and Quality of Banana Varieties in Kenya. , 2018, , 191-198.		0
10	Functional analysis of tomato rhamnogalacturonan lyase gene Solyc11g011300 during fruit development and ripening. <i>Journal of Plant Physiology</i> , 2018, 231, 31-40.	1.6	20
11	Polyamines: Bio-Molecules with Diverse Functions in Plant and Human Health and Disease. <i>Frontiers in Chemistry</i> , 2018, 6, 10.	1.8	183
12	Functional analysis of a tomato ( <i>Solanum lycopersicum</i> L.) rhamnogalacturonan lyase promoter. <i>Journal of Plant Physiology</i> , 2018, 229, 175-184.	1.6	7
13	Critical roles of DNA demethylation in the activation of ripening-induced genes and inhibition of ripening-repressed genes in tomato fruit. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E4511-E4519.	3.3	342
14	Pathogenesis-Related Protein 1b1 (PR1b1) Is a Major Tomato Fruit Protein Responsive to Chilling Temperature and Upregulated in High Polyamine Transgenic Genotypes. <i>Frontiers in Plant Science</i> , 2016, 7, 901.	1.7	61
15	Fruit metabolite networks in engineered and non-engineered tomato genotypes reveal fluidity in a hormone and agroecosystem specific manner. <i>Metabolomics</i> , 2016, 12, 103.	1.4	21
16	Polyamine Interactions with Plant Hormones: Crosstalk at Several Levels. , 2015, , 267-302.		49
17	Genetic introgression of ethylene-suppressed transgenic tomatoes with higher-polyamines trait overcomes many unintended effects due to reduced ethylene on the primary metabolome. <i>Frontiers in Plant Science</i> , 2014, 5, 632.	1.7	23
18	Enhanced flux of substrates into polyamine biosynthesis but not ethylene in tomato fruit engineered with yeast S-adenosylmethionine decarboxylase gene. <i>Amino Acids</i> , 2014, 46, 729-742.	1.2	46

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19	Functional Foods: Genetics, Metabolome, and Engineering Phytonutrient Levels. , 2013, , 1715-1749.		7
20	Polyamines Attenuate Ethylene-Mediated Defense Responses to Abrogate Resistance to <i>Botrytis cinerea</i> in Tomato. <i>Plant Physiology</i> , 2012, 158, 1034-1045.	2.3	111
21	Fruit development and ripening. , 2012, , 405-424.		12
22	Role of pectin methylesterases in cellular calcium distribution and blossom-end rot development in tomato fruit. <i>Plant Journal</i> , 2012, 71, 824-835.	2.8	83
23	Methyl jasmonate deficiency alters cellular metabolome, including the aminome of tomato ( <i>Solanum</i> ) Tj ETQq1 1 0,784314 rgBT /Over	1.2	43
24	Hot Water Treatment Delays Ripening-associated Metabolic Shift in 'Okrong' Mango Fruit during Storage. <i>Journal of the American Society for Horticultural Science</i> , 2011, 136, 441-451.	0.5	28
25	Polyamines and cellular metabolism in plants: transgenic approaches reveal different responses to diamine putrescine versus higher polyamines spermidine and spermine. <i>Amino Acids</i> , 2010, 38, 405-413.	1.2	142
26	Differential and functional interactions emphasize the multiple roles of polyamines in plants. <i>Plant Physiology and Biochemistry</i> , 2010, 48, 540-546.	2.8	126
27	Overexpression of yeast spermidine synthase impacts ripening, senescence and decay symptoms in tomato. <i>Plant Journal</i> , 2010, 63, 836-847.	2.8	120
28	Genetic Engineering to Enhance Crop-Based Phytonutrients (Nutraceuticals) to Alleviate Diet-Related Diseases. <i>Advances in Experimental Medicine and Biology</i> , 2010, 698, 122-143.	0.8	24
29	Glutathione Peroxidase Regulation of Reactive Oxygen Species Level is Crucial for In Vitro Plant Differentiation. <i>Plant and Cell Physiology</i> , 2010, 51, 1151-1162.	1.5	53
30	Maturity and ripening-stage specific modulation of tomato ( <i>Solanum lycopersicum</i> ) fruit transcriptome. <i>GM Crops</i> , 2010, 1, 237-249.	1.8	20
31	Biotechnological Interventions to Improve Plant Developmental Traits. , 2010, , 199-248.		4
32	Higher polyamines restore and enhance metabolic memory in ripening fruit. <i>Plant Science</i> , 2008, 174, 386-393.	1.7	84
33	A field-grown transgenic tomato line expressing higher levels of polyamines reveals legume cover crop mulch-specific perturbations in fruit phenotype at the levels of metabolite profiles, gene expression, and agronomic characteristics. <i>Journal of Experimental Botany</i> , 2008, 59, 2337-2346.	2.4	39
34	Polyamines as anabolic growth regulators revealed by transcriptome analysis and metabolite profiles of tomato fruits engineered to accumulate spermidine and spermine. <i>Plant Biotechnology</i> , 2007, 24, 57-70.	0.5	38
35	Overaccumulation of Higher Polyamines in Ripening Transgenic Tomato Fruit Revives Metabolic Memory, Upregulates Anabolism-Related Genes, and Positively Impacts Nutritional Quality. <i>Journal of AOAC INTERNATIONAL</i> , 2007, 90, 1456-1464.	0.7	45
36	Polyamines cross-talk with phospholipase A2 to regulate gene expression in tomato fruit and other plant models. <i>FASEB Journal</i> , 2007, 21, A1044.	0.2	1

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37	Overaccumulation of higher polyamines in ripening transgenic tomato fruit revives metabolic memory, upregulates anabolism-related genes, and positively impacts nutritional quality. <i>Journal of AOAC INTERNATIONAL</i> , 2007, 90, 1456-64.	0.7	20
38	Nuclear Magnetic Resonance Spectroscopy-Based Metabolite Profiling of Transgenic Tomato Fruit Engineered to Accumulate Spermidine and Spermine Reveals Enhanced Anabolic and Nitrogen-Carbon Interactions. <i>Plant Physiology</i> , 2006, 142, 1759-1770.	2.3	141
39	Hormonal Regulation of Tomato Fruit Development: A Molecular Perspective. <i>Journal of Plant Growth Regulation</i> , 2005, 24, 67-82.	2.8	258
40	Meiotic Reestablishment of Post-Transcriptional Gene Silencing is Regulated by Aberrant RNA Formation in Tomato ( <i>Lycopersicon esculentum</i> cv. Mill.). <i>Molecular Breeding</i> , 2005, 16, 139-149.	1.0	3
41	Ethylene Signaling in Plant Cell Death. , 2004, , 125-142.		12
42	A Novel Small Heat Shock Protein Gene, <i>vis1</i> , Contributes to Pectin Depolymerization and Juice Viscosity in Tomato Fruit. <i>Plant Physiology</i> , 2003, 131, 725-735.	2.3	63
43	Engineered polyamine accumulation in tomato enhances phytonutrient content, juice quality, and vine life. <i>Nature Biotechnology</i> , 2002, 20, 613-618.	9.4	352
44	Interaction between the tobacco mosaic virus movement protein and host cell pectin methylesterases is required for viral cell-to-cell movement. <i>EMBO Journal</i> , 2000, 19, 913-920.	3.5	306
45	Post-transcriptional silencing of pectin methylesterase gene in transgenic tomato fruits results from impaired pre-mRNA processing. <i>Plant Journal</i> , 1998, 14, 583-592.	2.8	28
46	Pectin Methylesterase Regulates Methanol and Ethanol Accumulation in Ripening Tomato ( <i>Lycopersicon esculentum</i> ) Fruit. <i>Journal of Biological Chemistry</i> , 1998, 273, 4293-4295.	1.6	100
47	Characterization and Functional Expression of a Ubiquitously Expressed Tomato Pectin Methylesterase. <i>Plant Physiology</i> , 1997, 114, 1547-1556.	2.3	112
48	Molecular Cloning of a Ripening-Specific Lipxygenase and Its Expression during Wild-Type and Mutant Tomato Fruit Development. <i>Plant Physiology</i> , 1997, 113, 1041-1050.	2.3	59
49	Identification of a Pathogenicity Locus, <i>rpfA</i> , in <i>Erwinia carotovora</i> subsp. <i>carotovora</i> That Encodes a Two-Component Sensor-Regulator Protein. <i>Molecular Plant-Microbe Interactions</i> , 1997, 10, 407-415.	1.4	49
50	Chemistry and uses of pectin – A review. <i>Critical Reviews in Food Science and Nutrition</i> , 1997, 37, 47-73.	5.4	1,182
51	Effect of an Antisense Pectin Methylesterase Gene on the Chemistry of Pectin in Tomato ( <i>Lycopersicon esculentum</i> ) Juice. <i>Journal of Agricultural and Food Chemistry</i> , 1996, 44, 628-630.	2.4	31
52	EFFECT OF ADDED SOY PROTEIN ON THE QUALITY OF TOMATO SAUCE. <i>Journal of Food Processing and Preservation</i> , 1996, 20, 169-176.	0.9	8
53	Tomato Product Quality from Transgenic Fruits with Reduced Pectin Methylesterase. <i>Journal of Food Science</i> , 1996, 61, 85-87.	1.5	49
54	Molecular Cloning and Characterization of Genes Expressed during Early Tomato ( <i>Lycopersicon</i> ) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 6 Horticultural Science, 1996, 121, 52-56.	0.5	18

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55	Differential regulation of polygalacturonase and pectin methylesterase gene expression during and after heat stress in ripening tomato ( <i>Lycopersicon esculentum</i> Mill.) fruits. <i>Plant Molecular Biology</i> , 1995, 29, 1101-1110.	2.0	37
56	Molecular Cloning and Nucleotide Sequence of a Lipoxygenase cDNA from Ripening Tomato Fruit. <i>Plant Physiology</i> , 1995, 107, 669-670.	2.3	9
57	Impaired Wound Induction of 3-Deoxy-D-arabino-heptulosonate-7-phosphate (DAHP) Synthase and Altered Stem Development in Transgenic Potato Plants Expressing a DAHP Synthase Antisense Construct. <i>Plant Physiology</i> , 1995, 108, 1413-1421.	2.3	38
58	Field Performance of Transgenic Tomato with Reduced Pectin Methylesterase Activity. <i>Journal of the American Society for Horticultural Science</i> , 1995, 120, 765-770.	0.5	16
59	Reduction in Pectin Methylesterase Activity Modifies Tissue Integrity and Cation Levels in Ripening Tomato ( <i>Lycopersicon esculentum</i> Mill.) Fruits. <i>Plant Physiology</i> , 1994, 106, 429-436.	2.3	191
60	Differential expression of tomato ( <i>Lycopersicon esculentum</i> L.) genes encoding shikimate pathway isoenzymes. I. 3-Deoxy-D-arabino-heptulosonate 7-phosphate synthase. <i>Plant Molecular Biology</i> , 1993, 23, 697-706.	2.0	48
61	An Antisense Pectin Methylesterase Gene Alters Pectin Chemistry and Soluble Solids in Tomato Fruit. <i>Plant Cell</i> , 1992, 4, 667.	3.1	75
62	An Antisense Pectin Methylesterase Gene Alters Pectin Chemistry and Soluble Solids in Tomato Fruit.. <i>Plant Cell</i> , 1992, 4, 667-679.	3.1	238
63	Light and Fungal Elicitor Induce 3-Deoxy-d-arabino-Heptulosonate 7-Phosphate Synthase mRNA in Suspension Cultured Cells of Parsley ( <i>Petroselinum crispum</i> L.). <i>Plant Physiology</i> , 1992, 98, 761-763.	2.3	56
64	PHYSIOLOGICAL AND HERITABLE CHANGES IN CYCLIC AMP LEVELS ASSOCIATED WITH CHANGES IN FLAGELLAR FORMATION IN <i>CHLAMYDOMONAS REINHARDTII</i> (CHLOROPHYTA)1. <i>Journal of Phycology</i> , 1991, 27, 587-591.	1.0	7
65	Molecular Cloning of Tomato Pectin Methylesterase Gene and its Expression in Rutgers, Ripening Inhibitor, Nonripening, and Never Ripe Tomato Fruits. <i>Plant Physiology</i> , 1991, 97, 80-87.	2.3	131
66	Temporal Regulation of Polygalacturonase Gene Expression in Fruits of Normal, Mutant, and Heterozygous Tomato Genotypes. <i>Plant Physiology</i> , 1989, 89, 117-125.	2.3	54
67	Effect of Ethylene Action Inhibitors upon Wound-Induced Gene Expression in Tomato Pericarp. <i>Plant Physiology</i> , 1989, 91, 157-162.	2.3	25
68	Immunocytolocalization of Polygalacturonase in Ripening Tomato Fruit. <i>Plant Physiology</i> , 1989, 90, 17-20.	2.3	45
69	Wounding induces the first enzyme of the shikimate pathway in Solanaceae. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1989, 86, 7370-7373.	3.3	136
70	Biochemical basis of high-temperature inhibition of ethylene biosynthesis in ripening tomato fruits. <i>Physiologia Plantarum</i> , 1988, 72, 572-578.	2.6	104
71	Characterization of Osmotin. <i>Plant Physiology</i> , 1987, 85, 529-536.	2.3	446
72	Hormonal regulation of protein synthesis associated with salt tolerance in plant cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1987, 84, 739-743.	3.3	169

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73	Immuno slot-blot assay using a membrane which covalently binds protein. <i>Journal of Immunological Methods</i> , 1987, 101, 133-139.	0.6	20
74	Solute Accumulation in Tobacco Cells Adapted to NaCl. <i>Plant Physiology</i> , 1987, 84, 1408-1415.	2.3	168
75	Changes in Protein Patterns and In Vivo Protein Synthesis during Presenescence and Senescence of Hibiscus Petals. <i>Journal of Plant Physiology</i> , 1987, 128, 67-75.	1.6	28
76	Studies on Inc-P plasmids in <i>Erwinia carotovora</i> subsp. <i>carotovora</i> . <i>FEMS Microbiology Letters</i> , 1986, 35, 307-312.	0.7	0
77	Changes in Gene Expression during Tomato Fruit Ripening. <i>Plant Physiology</i> , 1986, 81, 395-403.	2.3	79
78	Proline Accumulation and the Adaptation of Cultured Plant Cells to Water Stress. <i>Plant Physiology</i> , 1986, 80, 938-945.	2.3	214
79	Effect of tunicamycin on in vitro ripening of tomato pericarp tissue. <i>Physiologia Plantarum</i> , 1985, 63, 417-424.	2.6	22
80	Adenylate cyclase from the phytopathogenic fungus <i>Alternaria solani</i> . <i>FEMS Microbiology Letters</i> , 1985, 27, 313-318.	0.7	4
81	Behavior of bacteriophage P1 in <i>Erwinia carotovora</i> subsp. <i>carotovora</i> . <i>Current Microbiology</i> , 1985, 12, 73-78.	1.0	2
82	Adaptation of Tobacco Cells to NaCl. <i>Plant Physiology</i> , 1985, 79, 118-125.	2.3	164
83	Proteins Associated with Adaptation of Cultured Tobacco Cells to NaCl. <i>Plant Physiology</i> , 1985, 79, 126-137.	2.3	252
84	Abscisic Acid Accelerates Adaptation of Cultured Tobacco Cells to Salt. <i>Plant Physiology</i> , 1985, 79, 138-142.	2.3	89
85	Effects of a mutation that eliminates UDP glucose-pyrophosphorylase on the pathogenicity of <i>Erwinia carotovora</i> subsp. <i>carotovora</i> . <i>Journal of Bacteriology</i> , 1985, 164, 473-476.	1.0	13
86	Mutagenesis of <i>Erwinia carotovora</i> subsp. <i>carotovora</i> with bacteriophage Mu d1 (Apr lac cts62): construction of his-lac gene fusions. <i>Journal of Bacteriology</i> , 1984, 158, 764-766.	1.0	20
87	Occurrence of cyclic adenosine 3',5'-monophosphate in the phytopathogenic fungi <i>Alternaria solani</i> and <i>Phymatotrichum omnivorum</i> . <i>Archives of Microbiology</i> , 1983, 135, 125-129.	1.0	1
88	Solutes Contributing to Osmotic Adjustment in Cultured Plant Cells Adapted to Water Stress. <i>Plant Physiology</i> , 1983, 73, 834-843.	2.3	185
89	Clonal Variation for Tolerance to Polyethylene Glycol-Induced Water Stress in Cultured Tomato Cells. <i>Plant Physiology</i> , 1983, 72, 645-653.	2.3	37
90	Characteristics of Cultured Tomato Cells after Prolonged Exposure to Medium Containing Polyethylene Glycol. <i>Plant Physiology</i> , 1982, 69, 514-521.	2.3	73

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91	Growth and Water Relations of Cultured Tomato Cells after Adjustment to Low External Water Potentials. <i>Plant Physiology</i> , 1982, 70, 1303-1309.	2.3	60
92	Use of plant cell cultures to study production and phytotoxicity of <i>Alternaria solani</i> toxin(s). <i>Physiological Plant Pathology</i> , 1982, 21, 295-309.	1.4	15
93	Resistance of cultured higher plant cells to polyethylene glycol-induced water stress. <i>Plant Science Letters</i> , 1981, 21, 23-30.	1.9	106
94	Association of Formation and Release of Cyclic AMP with Glucose Depletion and Onset of Chlorophyll Synthesis in <i>Poteroiochromonas malhamensis</i> . <i>Plant Physiology</i> , 1981, 68, 460-463.	2.3	14
95	Synthesis and release of adenosine 3'â€²: 5'â€²-cyclic monophosphate by <i>Chlamydomonas reinhardtii</i> . <i>Phytochemistry</i> , 1980, 19, 2089-2093.	1.4	15
96	Assay of adenosine 3'â€², 5'â€² cyclic monophosphate by stimulation of protein kinase: A method not involving radioactivity. <i>Analytical Biochemistry</i> , 1980, 102, 332-339.	1.1	12
97	Growth characteristics of NaCl-selected and nonselected cells of <i>Nicotiana tabacum</i> L.. <i>Plant and Cell Physiology</i> , 1980, 21, 1347-1355.	1.5	112
98	Synthesis and Release of Cyclic Adenosine 3'â€²:5'â€²-Monophosphate by <i>Ochromonas malhamensis</i> . <i>Plant Physiology</i> , 1980, 65, 165-170.	2.3	26
99	Involvement of cyclic adenosine-3', 5'-monophosphate in chloronema differentiation in protonema cultures of <i>Funaria hygrometrica</i> . <i>Planta</i> , 1979, 144, 317-324.	1.6	25
100	Effect of nitrogen starvation on the level of adenosine 3'â€²,5'â€²-monophosphate in <i>Anabaena variabilis</i> . <i>Biochimica Et Biophysica Acta - General Subjects</i> , 1979, 588, 193-200.	1.1	41
101	Synthesis and processing of maize storage proteins in <i>Xenopus laevis</i> oocytes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1979, 76, 6448-6452.	3.3	84
102	Cyclic Adenosine 3'â€²:5'â€²-Monophosphate in Moss Protonema. <i>Plant Physiology</i> , 1977, 59, 490-496.	2.3	41