Subbaratnam Muthukrishnan

List of Publications by Year
in descending order

62 papers	4,108 citations	101384 36 h-index	138251 58 g-index
62 all docs	62 docs citations	62 times ranked	2948 citing authors

#	Article	IF	Citations
1	Biosynthesis, Turnover, and Functions of Chitin in Insects. Annual Review of Entomology, 2016, 61, 177-196.	5.7	291
2	Functional specialization among insect chitinase family genes revealed by RNA interference. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6650-6655.	3.3	221
3	Molecular and Functional Analyses of Amino Acid Decarboxylases Involved in Cuticle Tanning in Tribolium castaneum. Journal of Biological Chemistry, 2009, 284, 16584-16594.	1.6	181
4	Characterization of two chitin synthase genes of the red flour beetle, Tribolium castaneum, and alternate exon usage in one of the genes during development. Insect Biochemistry and Molecular Biology, 2004, 34, 291-304.	1.2	167
5	Multifaceted biological insights from a draft genome sequence of the tobacco hornworm moth, Manduca sexta. Insect Biochemistry and Molecular Biology, 2016, 76, 118-147.	1.2	154
6	Insect resistance of transgenic tobacco expressing an insect chitinase gene. Transgenic Research, 1998, 7, 77-84.	1.3	151
7	Chitin synthases are required for survival, fecundity and egg hatch in the red flour beetle, Tribolium castaneum. Insect Biochemistry and Molecular Biology, 2008, 38, 959-962.	1.2	145
8	Analysis of functions of the chitin deacetylase gene family in Tribolium castaneum. Insect Biochemistry and Molecular Biology, 2009, 39, 355-365.	1.2	145
9	Genes encoding proteins with peritrophin A-type chitin-binding domains in Tribolium castaneum are grouped into three distinct families based on phylogeny, expression and function. Insect Biochemistry and Molecular Biology, 2010, 40, 214-227.	1.2	141
10	Domain organization and phylogenetic analysis of proteins from the chitin deacetylase gene family of Tribolium castaneum and three other species of insects. Insect Biochemistry and Molecular Biology, 2008, 38, 440-451.	1.2	130
11	Domain organization and phylogenetic analysis of the chitinase-like family of proteins in three species of insects. Insect Biochemistry and Molecular Biology, 2008, 38, 452-466.	1.2	129
12	Cuticle formation and pigmentation in beetles. Current Opinion in Insect Science, 2016, 17, 1-9.	2.2	125
13	Chitin synthase genes in Manduca sexta: characterization of a gut-specific transcript and differential tissue expression of alternately spliced mRNAs during development. Insect Biochemistry and Molecular Biology, 2005, 35, 529-540.	1.2	110
14	Knickkopf protein protects and organizes chitin in the newly synthesized insect exoskeleton. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 17028-17033.	3.3	106
15	Chitin is a necessary component to maintain the barrier function of the peritrophic matrix in the insect midgut. Insect Biochemistry and Molecular Biology, 2015, 56, 21-28.	1.2	104
16	Gene Families of Cuticular Proteins Analogous to Peritrophins (CPAPs) in Tribolium castaneum Have Diverse Functions. PLoS ONE, 2012, 7, e49844.	1.1	95
17	Overview of chitin metabolism enzymes in Manduca sexta: Identification, domain organization, phylogenetic analysis and gene expression. Insect Biochemistry and Molecular Biology, 2015, 62, 114-126.	1.2	95
18	A chitin-like component in Aedes aegypti eggshells, eggs and ovaries. Insect Biochemistry and Molecular Biology, 2007, 37, 1249-1261.	1.2	94

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19	Sequences of cDNAs and expression of genes encoding chitin synthase and chitinase in the midgut of Spodoptera frugiperda. Insect Biochemistry and Molecular Biology, 2005, 35, 1249-1259.	1.2	89
20	Analysis of chitin-binding proteins from Manduca sexta provides new insights into evolution of peritrophin A-type chitin-binding domains in insects. Insect Biochemistry and Molecular Biology, 2015, 62, 127-141.	1.2	88
21	Characterization and expression of the Î²-N-acetylhexosaminidase gene family of Tribolium castaneum. Insect Biochemistry and Molecular Biology, 2008, 38, 478-489.	1.2	84
22	Two essential peritrophic matrix proteins mediate matrix barrier functions in the insect midgut. Insect Biochemistry and Molecular Biology, 2014, 49, 24-34.	1.2	82
23	Sequence of a cDNA and expression of the gene encoding a putative epidermal chitin synthase of Manduca sexta. Insect Biochemistry and Molecular Biology, 2002, 32, 1497-1506.	1.2	76
24	Two major cuticular proteins are required for assembly of horizontal laminae and vertical pore canals in rigid cuticle of Tribolium castaneum. Insect Biochemistry and Molecular Biology, 2014, 53, 22-29.	1.2	76
25	Structure and organization of two divergent ?-amylase genes from barley. Plant Molecular Biology, 1987, 9, 3-17.	2.0	69
26	Tribolium castaneum RR-1 Cuticular Protein TcCPR4 Is Required for Formation of Pore Canals in Rigid Cuticle. PLoS Genetics, 2015, 11, e1004963.	1.5	69
27	Cuticular protein with a low complexity sequence becomes cross-linked during insect cuticle sclerotization and is required for the adult molt. Scientific Reports, 2015, 5, 10484.	1.6	67
28	Induction of thaumatin-like proteins (TLPs) in Rhizoctonia solani -infected rice and characterization of two new cDNA clones. Physiologia Plantarum, 1998, 102, 21-28.	2.6	61
29	Chymotrypsin-like peptidases from Tribolium castaneum: A role in molting revealed by RNA interference. Insect Biochemistry and Molecular Biology, 2010, 40, 274-283.	1.2	49
30	A chitinase with two catalytic domains is required for organization of the cuticular extracellular matrix of a beetle. PLoS Genetics, 2018, 14, e1007307.	1.5	46
31	Yellow-g and Yellow-g2 proteins are required for egg desiccation resistance and temporal pigmentation in the Asian tiger mosquito, Aedes albopictus. Insect Biochemistry and Molecular Biology, 2020, 122, 103386.	1.2	46
32	Identification of an endochitinase cDNA clone from barley aleurone cells. Plant Molecular Biology, 1989, 12, 403-412.	2.0	44
33	A novel cereal storage protein: molecular genetics of the 19 kDa globulin of rice. Plant Molecular Biology, 1992, 18, 151-154.	2.0	43
34	Induction of chitinases and beta-l,3-glucanases in Rhizoctonia solani-infected rice plants: Isolation of an infection-related chitinase cDNA clone. Physiologia Plantarum, 1996, 97, 39-46.	2.6	43
35	Insect Cuticular Chitin Contributes to Form and Function. Current Pharmaceutical Design, 2020, 26, 3530-3545.	0.9	43
36	Oxalic acid-induced resistance to<i>Rhizoctonia solani</i>in rice is associated with induction of phenolics, peroxidase and pathogenesis-related proteins. Journal of Plant Interactions, 2010, 5, 147-157.	1.0	41

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37	Arylalkylamine N-acetyltransferase 1 gene (TcAANAT1) is required for cuticle morphology and pigmentation of the adult red flour beetle, Tribolium castaneum. Insect Biochemistry and Molecular Biology, 2016, 79, 119-129.	1.2	39
38	Chitin Organizing and Modifying Enzymes and Proteins Involved InÂRemodeling of the Insect Cuticle. Advances in Experimental Medicine and Biology, 2019, 1142, 83-114.	0.8	37
39	Gene functions in adult cuticle pigmentation of the yellow mealworm, Tenebrio molitor. Insect Biochemistry and Molecular Biology, 2020, 117, 103291.	1.2	37
40	Development and ultrastructure of the rigid dorsal and flexible ventral cuticles of the elytron of the red flour beetle, Tribolium castaneum. Insect Biochemistry and Molecular Biology, 2017, 91, 21-33.	1.2	36
41	Group I chitin deacetylases are essential for higher order organization of chitin fibers in beetle cuticle. Journal of Biological Chemistry, 2018, 293, 6985-6995.	1.6	34
42	The effect of lufenuron, a chitin synthesis inhibitor, on oogenesis of Rhodnius prolixus. Pesticide Biochemistry and Physiology, 2010, 98, 59-67.	1.6	33
43	Variability in antifungal proteins in the grains of maize, sorghum and wheat. Physiologia Plantarum, 1993, 88, 339-349.	2.6	30
44	Nucleotide and predicted amino acid sequences of two different genes for high-pI ?-amylases from barley. Plant Molecular Biology, 1989, 12, 119-121.	2.0	24
45	Nucleotide sequence of a cDNA clone that encodes the maize inhibitor of trypsin and activated Hageman factor. Plant Molecular Biology, 1992, 18, 813-814.	2.0	23
46	Knickkopf and retroactive proteins are required for formation of laminar serosal procuticle during embryonic development of Tribolium castaneum. Insect Biochemistry and Molecular Biology, 2015, 60, 1-6.	1.2	22
47	Functional Specialization Among Members Of Knickkopf Family Of Proteins In Insect Cuticle Organization. PLoS Genetics, 2014, 10, e1004537.	1.5	19
48	Nucleotide sequence of a cloned rice genomic DNA fragment that encodes a 10 kDa prolamin polypeptide. Nucleic Acids Research, 1990, 18, 683-683.	6.5	14
49	Future questions in insect chitin biology: A microreview. Archives of Insect Biochemistry and Physiology, 2018, 98, e21454.	0.6	14
50	Chitin Metabolic Pathways in Insects and Their Regulation. , 2016, , 31-65.		12
51	Yellow-y Functions in Egg Melanization and Chorion Morphology of the Asian Tiger Mosquito, Aedes albopictus. Frontiers in Cell and Developmental Biology, 2021, 9, 769788.	1.8	10
52	AA15 lytic polysaccharide monooxygenase is required for efficient chitinous cuticle turnover during insect molting. Communications Biology, 2022, 5, .	2.0	10
53	Chitin in insect cuticle. Advances in Insect Physiology, 2022, , 1-110.	1.1	5
54	A Major Facilitator Superfamily protein encoded by TcMucK gene is not required for cuticle pigmentation, growth and development in Tribolium castaneum. Insect Biochemistry and Molecular Biology, 2014, 49, 43-48.	1.2	2

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55	Functional analysis of TcCTLP-5C2, a chymotrypsin-like serine protease needed for molting in Tribolium castaneum. Insect Biochemistry and Molecular Biology, 2017, 86, 20-28.	1.2	2
56	Chitin deacetylases are necessary for insect femur muscle attachment and mobility. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	2
57	Cuticle tanning in Tribolium castaneum. Entomological Research, 2011, 41, 293-293.	0.6	1
58	Expression Profiles and Functional Analysis of Genes Encoding Chitin Deacetylases, Extracellular Matrix-Modifying Proteins in Tribolium castaneum. Entomological Research, 2011, 41, 294-294.	0.6	1
59	Why a Membrane-Anchored Chitinase (CHT7) in Tribolium?. Entomological Research, 2011, 41, 298-298.	0.6	1
60	Functional Analysis of Genes of Chitin Metabolism in Tribolium castaneum by RNA interference. Entomological Research, 2011, 41, 295-295.	0.6	0
61	RNAi-based functional analysis of yellow-e in Tribolium castaneum. Entomological Research, 2011, 41, 296-296.	0.6	0
62	Two Major Structural Proteins Are Required for Rigid Adult Cuticle Formation in the Red Flour Beetle, Tribolium castaneum. Entomological Research, 2011, 41, 297-297.	0.6	0