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[Continued on next page]

(54) Title: LECITIN-LIKE PROTEIN KINASE STRESS-RELATED POLYPEPTIDES AND METHODS OF USE IN PLANTS

Nucleotide sequence of the PpLLPK-1 from *Physcomitrella patens* (SEQ ID NO:1)

TTTCTAAGCTATTCAACCTGGATTGATTTCAGTATGCAGATTAACAACGGTTTCTTGC
ACTTGGTGTCTACCCTCCTAGGTTTACTTCATTTAGCAACTTTTGCCACAGCTGAATT
GAAAACTATTGAATTTAGTTTTCCTAATTTTAAGAGTCCGGAGAATGATGGTACAAT
CAACATTCCGAATGCAACAGATGTGCCTAGTGGTAGGAACGTCCTCTTCCTTCCCAA
GGAAAAGAACGCCATGAGTGTTGGGTGGGTTATTTATGAAGAGAAAGTTCAATTCT
GGGACAACTCCGATGACGCTGCTTCTTTTAGTACAGAGTTTACCTTCAGTACTTCAG
GTTACAATGCGTCAACCGGAGGTAGCGGACTTGCATTCTTGATAACTCCAGATTTTT
CCATCGGTGACATTCGTGGATACCTTGGGATATTTTCATCGACAACCAACGCCTCCA
CAAACAATCAAAAGATTGCAGTGGAGATTGATGTTTTCAAGAACCCATGGGATCCA
AGCGCCAGCCACATTGGCTTAGACGTAAACTCCATCGAATCCGTGAAGGTAAAAGA
CTATTGTCCGGTGATGGATAACCGTTGCACTTACTTTACCAACAAAGGGGACATCAA
TGTTTGGATTGACTACATGGCTGAAAGTGAGACTCTTGAAGTGCGCTTAGCAATGGG
TTCAAGCAGTGTGAAGCCAACCCAGCCGGATCTACAATTCATTGGATTGAACTTGCC
AAGGACTATCCGAAACTTTATGTATGTGGGGTTTTCAGCAGCCACTGGAAGTGACTT
TTATCCTGCACACACATTTCGATTACGTCGATGGAGCTTTAAAACTACGGCTCCGTC
CAACGGAAAAAAGAACATTTTACTTATCGCCGTGCTCAGTGCTGCTGCAGGTCTCAT
TTTCATAATTATTGTAGTTCTCTTGTGTATTTGCAGAGCAAGATTGAGATGTTGCTGT
TGTGCTCCTGCTCCTGCTCCATGCCTTGACGATCCTTTCCCGCAAATTGCACAACTTG
CAAGTGGACCTCGAATATTCACGTACAGAGAACTAAGTGATGCAACAAAGGGGTTC
AGTGAGAATGAGTTGCTAGGGCAGGGGGGATTTGGCAAGGTCTTTCGTGGAGTGCT
GAGGAGTGGAACCATGATAGCCGTGAAAAAAATTTCAGAAGGCTCAGATCAAGGCG
AACAGCAGTTTGTAGCGGAAGTGTCGATTATTAGCAATATCCGGCATCGCAGCGTGG
TCCAGTTACAAGGCTGGTGCCACGAACAAGGTCAGCTCATACTTGTTTACGATTACA
TGCCGAACGGTGGCCTGGATCAGCACCTCTACGCAAGTAATTGTCCCCTCAATTGGA
CCATGCGTTACAATGTCATCGTAGATCTTGCATCTGCTCTCGCCTATCTGCACGAAA
AGCTGGAGCAATGCGTGATCCACCGTGACATTAAAGCAAGCAATGTGATGCTTGAC
AGGGACTTCAAAGGGCGATTGGGTGACTTTGGACTTGCAAAATCATCAGCTCGCGAT
ATGGTGGCTGCAACTACCAAGCTGGCTGGAACCATGGTATACATGGCACCTGAACTT
CCTATCACGTTTAAACCCACCACGGAGAGTGACGTATACAGTTTTGGAATACTGGCA
CTGGAGGTTATATGCCGAAGGCGGCCTTTCGACGGGACTGTTATACTGTTAGACTGG
GTGTGGGAGAAGCATGAGCAAGGAGAGCTTCTACAGGTTGTAGACCCTGGTTTGAA
CCAAGCTTTCGATCGTACTCAAGCTCAGGTTGCATTGTCCGTTGCGCTGATGTGTGCC
AATCCCAATCCTAATGAACGTCTTCGGATGCAGATGGCCCGTCAAATGTTGATAGGA
GAAGTGTCGGTGCCTCCTCTCCCTGCTAACAGACCATTCATGCTGTATTCAAATGTG
AATTCCGAACAAGGATCGTGTAACAACTCAGGATTTCATTCTGACGCTTGGAATACA
GCCGCAATAGAAAATGGAAGAGTGACAATTATACAGAGACCCGAGATGAATCCGAG
A

(57) Abstract: A transgenic plant transformed by a Lectin-like Protein Kinase Stress-Related Polypeptide (LPKSRP) coding nucleic acid, wherein expression of the nucleic acid sequence in the plant results in increased plant growth and/or increased tolerance to an environmental stress as compared to a wild type variety of the plant. Also provided are agricultural products, including seeds, produced by the transgenic plants. Also provided are isolated LPKSRPs, and isolated nucleic acid coding LPKSRPs, and vectors and host cells containing the latter.

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FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. C12N9/12 A01H5/00 C12N15/82

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C12N A01H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, BIOSIS, EMBASE, Sequence Search, EMBL

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01/45492 A2 (BASF PLANT SCIENCE GMBH [DE]; COSTA E SILVA OSWALDO DA [US]; ISHITANI) 28 June 2001 (2001-06-28) example 7	1-33
A	NAVARRO-GOCHICOA MARIA-TERESA ET AL: "Characterization of four lectin-like receptor kinases expressed in roots of Medicago truncatula. Structure, location, regulation of expression, and potential role in the symbiosis with Sinorhizobium meliloti." PLANT PHYSIOLOGY (ROCKVILLE), vol. 133, no. 4, December 2003 (2003-12), pages 1893-1910, XP002405397 ISSN: 0032-0889 the whole document	1-33

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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Name and mailing address of the ISA/	Authorized officer
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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PCT/EP2006/063270

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