

LISTADO DE SECUENCIAS

<110> Dow AgroSciences LLC
 Kumar, Sandeep
 Hemingway, Daren
 Ausmus, Carla
 Worden, Andrew
 Ashberry, Andrew

<120> PROMOTOR DE PLANTAS PARA LA EXPRESIÓN TRANSGÉNICA

<130> 77035-WO-PCT

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<170> PatentIn versión 3.5

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tgttacttct	gcaggtagag	tagttagttg	aggtaccgga	tccacacgac	accatggctc	2040
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gtgtccttgg	tgctgagatc	actggagtgg	acttgaggga	accacttgat	gacagcacct	2160
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ttctcaagag cattgaaggc tatccagagg ttcagatgat ccgcagagaa gccaatgagt	2340
ctggaagggg gattgggtgat gactggcaca cagactccac tttccttgat gcacctccag	2400
ctgctgttgt gatgagggcc atagatgttc ctgagcatgg cggagacact gggttccttt	2460
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ccttggttgt gactcatcct ggctctggaa ggaaaggcct ttatgtgaat caagtctact	2700
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gcgcgcgac cagaagcgttg cgttggcgtg tgtgtgcttc tggtttgctt taattttacc	3060
aagtttgctt caaggtggat cgcgtggtca aggcccggtg gctttaaaga cccaccggca	3120
ctggcagtga gtgttgctgc ttgtgtaggc tttggtacgt atgggcttta tttgcttctg	3180
gatgttgtgt actacttggg tttgttgaat tattatgagc agttgcgtat tgtaattcag	3240
ctgggctacc tggacattgt tatgtattaa taaatgcttt gctttcttct aaagatcttt	3300
aagtgct	3307

<210> 6
 <211> 338
 <212> ADN
 <213> Brachypodium distachyon

<400> 6	
atgtcttgca gctgtggatc tggatgcagc tgcggctcaa actgcacctg cgggtatgta	60
tagatgctta attctgtgtt gcagattact acgtagctgc taataccatc taagtaatga	120
caatgctttc tcatgatgat caattttcat ttgctgtgtg gttcagcaag atgtaccctg	180
acttggcaga gaagagcggc ggcaccacgc aggccaccac catgatcctc ggcgttgccg	240
ctgctaaggc ccagtttgag gaggccgccg agtccggtga ggccggccat ggctgcagct	300
gcggcgccaa ctgcaagtgc gaccctgca actgctaa	338

<210> 7
 <211> 1730
 <212> ADN

<213> *Brachypodium distachyon*

<400> 7

gggggggcatt gtatggtggc ttgggtcgtg gtgtgttcgc cgaagccttt cgggtggactc	60
ggaattccaa atcttcgcat gctcaacgag gccttgaggg tccgctagag gtggcttgag	120
agggtggacg attccaaacc atgggtcggg ttcaagggtg agacgcccag aggtctatgt	180
tatcttttag gcgggccactt cctcttttggg gggcgatggc cggaagaccc tcttctggac	240
cgatcgttgg ctgcatggcg tctgttttcg agatgcgttc ctgatcctcg tgggccatgt	300
ttgccacaag tttttgcgca cgcgcacagt gcgggagggt ctgcatggag cgtggactgg	360
cgacatgggt ccagacctaa agggaagcta ctcttgagga gttcctcact ctctgggact	420
ggcttcgtgg ggtccaactg gaagaaggga gggccgactc tcttcattgg aactggtctc	480
gtggtgatag ttactcggca aagactgctt atgcgaatct cttcactggc cgcattggtg	540
accggttagc ggctgagatc tagggcttcg gagagggtgc gtttcttcgt ctggctcgca	600
gttcgaaata gatgctagac ggcgatcgc ttgcgaggcg tgggcttccc caccctgaca	660
agtgtcagga gatggagacc atttcccac tactcttggg gtgtgtcttg gcgaggcagg	720
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cggggatcat acttgttctt tggaccattt ggtgccattg gaatgatgtg gccttccttg	900
cagcttgctg tgcttcgcct ccaggaggag tttggtcggg gggcgcacgc cggcctcttt	960
aggggtagag tgtctattcc agccttgatg gtgagtgggt ggatagctag cacatagtct	1020
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tctggctctt ctattttaat cgatgatgca cccgctgggt ggcattcttg aaattttttt	1140
gagaaaatac tcctacaaag gaagtacagt aatttgatac acaatgcttt ctctaaatac	1200
gaaaatacaa acatcctaata gttattccaa ctatgctact ccctccgttc ctaaactctt	1260
atctttgttt ttgttcaaata ttgtacaaaa caacgacaaa aatttagtaa cggaggaagt	1320
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cagtagattt aaaatgacct cacatactga agaaggaaag ggaagttaac cacgccattg	1500
ttgcttttagc agaaagcaac catatcctaa ttaacatcac agtacacgtt gaaacggcag	1560
ggcacgataa ttggtgaaga ctgattccag ggagcatcgt ggcacgcaaa aacgcccttg	1620
ccttgttccc ttataaatag tgggtgcagaa gatacatttg tgatcaccat ctcaaagcgc	1680
ctctttattc ccctttcatc ttgagcttaa gtactagaga aaaattaagg	1730

<210> 8
 <211> 1530
 <212> ADN
 <213> *Brachypodium distachyon*

 <400> 8
 cctcttttggg gggcgatggc cggaagaccc tcttctggac cgatcgttgg ctgcatggcg 60
 tctgtttttcg agatgcgttc ctgatcctcg tgggccatgt ttgccacaag tttttgcgca 120
 cgcgcacagt gcgggaggct ctgcatggag cgtggactgg cgacatgggt ccagacctaa 180
 agggaagcta ctcttgagga gttcctcact ctctgggact ggcttcgtgg ggtccaactg 240
 gaagaaggga gggccgactc tcttcattgg aactggtctc gtggtgatag ttactcggca 300
 aagactgctt atgcgaatct cttcactggc cgcatggttg acccgttagc ggctgagatc 360
 tagggcttcg gagagggtgc gtttcttcgt ctggctcgca gttcgaaata gatgctagac 420
 ggcggatcgc ttgcgaggcg tgggcttccc caccctgaca agtgtcagga gatggagacc 480
 atttcccatc tactcttggg gtgtgtcttg gcgaggcagg tttgggagcg cttgtgggcg 540
 gcttggggac acgtggagtg ggctccgaat gcggatgcta ctctgcggga atggtggtct 600
 tctcttccct taccacggcg agcccgagg gacttccgga cggggatcat acttgttctt 660
 tggaccatth ggtgccattg gaatgatgtg gccttccttg cagcttgctg tgcttcgcct 720
 ccaggaggag tttggtcggg gggcgcacgc cggcctcttt aggggtagag tgtctattcc 780
 agccttgatg gtgagtgggt ggatagctag cacatagtct ttttttctct ttcttgccac 840
 ttggtgatgt tgtattgccg cttcggcggt gtactagcct tctggctctt cttatttaat 900
 cgatgatgca cccgctgggt ggcattcttg aaattttttt gagaaaatac tcctacaaag 960
 gaagtacagt aatttgatac acaatgcttt ctctaaatac gaaaatacaa acatcctaata 1020
 gttattccaa ctatgtact ccctccgttc cttaaactctt atctttgttt ttgttcaaata 1080
 ttgtacacaaa caacgacaaa aatttagtaa cggaggaagt atatatacga agtgatacca 1140
 aataaggtgt ttctttactt gaaagctagt tcctctgagg taaaagaaat gatgaggatc 1200
 aaggaaggcc catthcttgc cggcacgcag ttgccgaagt cagtagatth aaaatgacct 1260
 cacatactga agaaggaaag ggaagttaac cacgccattg ttgcttttagc agaaagcaac 1320
 catatcctaa ttaacatcac agtacacgtt gaaacggcag ggcacgataa ttggtgaaga 1380
 ctgattccag ggagcatcgt ggcacgcaaa aacgcccttg ccttgttccc ttataaatag 1440
 tgggtgcagaa gatacatthg tgatcaccat ctcaaagcgc ctctttattc ccctttcatc 1500
 ttgagcttaa gtactagaga aaaattaagg 1530

<210> 9
 <211> 1330
 <212> ADN
 <213> *Brachypodium distachyon*

<400> 9
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 tcttcattgg aactgggtctc gtgggtgatag ttactcggca aagactgctt atgcgaatct 120
 cttcactggc cgcattgggtg acccgtttagc ggctgagatc tagggcttcg gagaggtgtc 180
 gtttcttcgt ctggctcgca gttcgaaata gatgctagac ggcggatcgc ttgcgaggcg 240
 tgggcttccc caccctgaca agtgtcagga gatggagacc atttcccatc tactcttggg 300
 gtgtgtcttg gcgaggcagg tttgggagcg cttgtgggag gcttggggac acgtggagtg 360
 ggctccgaat gcggatgcta ctctgcggga atggtggtct tctcttcctt taccacggcg 420
 agcccggagg gacttccgga cggggatcat acttggttctt tggaccattt ggtgccattg 480
 gaatgatgtg gccttccttg cagcttgtcg tgcttcgcct ccaggaggag tttggtcggg 540
 gggcgcacgc cggcctcttt aggggtagag tgtctattcc agccttgatg gtgagtgggt 600
 ggatagctag cacatagtct ttttttctct ttcttgccac ttggtgatgt tgtattgccg 660
 cttcggcggt gtactagcct tctggctctt cttatttaat cgatgatgca cccgctgggt 720
 ggcattcttg aaattttttt gagaaaatac tcctacaaag gaagtacagt aatttgatac 780
 acaatgcttt ctctaaatac gaaaatacaa acatcctaata gttattccaa ctatgctact 840
 ccctccgttc ctaaactctt atctttgttt ttgttcaaata ttgtaccaa caacgacaaa 900
 aatttagtaa cggaggaagt atatatacga agtgatacca aataagggtg ttctttactt 960
 gaaagctagt tcctctgagg taaaagaaat gatgaggatc aaggaaggcc ctttcttgc 1020
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 ggaagttaac cagccattg ttgcttttagc agaaagcaac catatcctaa ttaacatcac 1140
 agtacacgtt gaaacggcag ggcacgataa ttggtgaaga ctgattccag ggagcatcgt 1200
 ggcacgcaaa aacgcccttg ccttggtccc ttataaatag tgggtgcagaa gatacatttg 1260
 tgatcaccat ctcaaagcgc ctctttattc ccctttcatc ttgagcttaa gtactagaga 1320
 aaaattaagg 1330

<210> 10
 <211> 1130
 <212> ADN
 <213> *Brachypodium distachyon*

<400> 10

gttcgaaata gatgctagac ggcggatcgc ttgcgaggcg tgggcttccc caccctgaca 60
 agtgtcagga gatggagacc atttcccac tactcttggg gtgtgtcttg gcgaggcagg 120
 tttgggagcg cttgtgggcg gcttggggac acgtggagtg ggctccgaat gcggatgcta 180
 ctctgcggga atggtggtct tctcttccct taccacggcg agcccgagg gacttccgga 240
 cggggatcat acttgttctt tggaccattt ggtgccattg gaatgatgtg gccttccttg 300
 cagcttgtcg tgcttcgcct ccaggaggag tttggtcggt gggcgcacgc cggcctcttt 360
 aggggtagag tgtctattcc agccttgatg gtgagtgggt ggatagctag cacatagtct 420
 ttttttctct ttcttgccac ttggtgatgt tgtattgccg cttcggcggt gtactagcct 480
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 gagaaaatac tcctacaaag gaagtacagt aatttgatac acaatgcttt ctctaaatac 600
 gaaaatacaa acatccta atgtattcaa ctatgctact ccctccgttc ctaaactctt 660
 atctttgttt ttgttcaa atgtaccaaa caacgacaaa aatttagtaa cggaggaagt 720
 atatatacga agtgatacca aataagggtgt ttctttactt gaaagctagt tcctctgagg 780
 taaaagaaat gatgaggatc aaggaaggcc cttttcttgc cggcacgcag ttgccgaagt 840
 cagtagattt aaaatgacct cacatactga agaaggaaag ggaagttaac cagccattg 900
 ttgcttttagc agaaagcaac catatcctaa ttaacatcac agtacacgtt gaaacggcag 960
 ggcacgataa ttggtgaaga ctgattccag ggagcatcgt ggcacgcaaa aacgcccttg 1020
 ccttgttccc ttataaatag tgggtgcagaa gatacatttg tgatcaccat ctcaaagcgc 1080
 ctctttattc ccctttcatc ttgagcttaa gtactagaga aaaattaagg 1130

<210> 11

<211> 1001

<212> ADN

<213> *Brachypodium distachyon*

<400> 11

gcttgtgggc ggcttgggga cacgtggagt gggctccgaa tgcggatgct actctgcggg 60
 aatggtgggc ttctcttccc ttaccacggc gagcccgagg ggacttccgg acggggatca 120
 tacttgttct ttggaccatt tggtgccatt ggaatgatgt ggccttcctt gcagcttgtc 180
 gtgcttcgcc tccaggagga gtttggtcgg tgggcgcacg cggcctctt taggggtaga 240
 gtgtctattc cagccttgat ggtgagtggg tggatagcta gcacatagtc tttttttctc 300
 tttcttgcca cttggtgatg ttgtattgcc gcttcggcgt tgtactagcc ttctggctct 360
 tcttatttaa tcgatgatgc acccgctggg tggcattctt gaaatttttt tgagaaaata 420
 ctctacaaa ggaagtacag taatttgata cacaatgctt tctctaaata cgaaaataca 480

aacatcctaa tgttattcca actatgctac tccctccgtt cctaaactct tatctttggt 540
 tttgttcaaa tttgtaccaa acaacgacaa aaatttagta acggaggaag tatatatacg 600
 aagtgatacc aaataaggtg tttctttact tgaaagctag ttcctctgag gtaaaagaaa 660
 tgatgaggat caaggaaggc ccatttcttg cgggcacgca gttgccgaag tcagtagatt 720
 taaaatgacc tcacatactg aagaaggaaa gggaagttaa ccacgccatt gttgcttttag 780
 cagaaagcaa ccatatccta attaacatca cagtacacgt tgaaacggca gggcacgata 840
 attggtgaag actgattcca gggagcatcg tggcacgcaa aaacgccctt gccttggtcc 900
 cttataaata gtggtgcaga agatacattt gtgatcacca tctcaaagcg cctctttatt 960
 cccctttcat cttgagctta agtactagag aaaaattaag g 1001

<210> 12

<211> 2000

<212> ADN

<213> Secuencia Artificial

<220>

<223> Versión modificada de un promotor de un gen similar al de metalotioneína (mtl) de *Brachypodium distachyon*

<400> 12

tttcgtgtgc ttacttgggg cttcctttgg gcctgcgga gacagacggcg tgccaggtac 60
 gaggttggtg gtggacaatg tggatggacg atttctagct tcgtggaagg cccttctcct 120
 taaggaggga tgactggtgc tggtaagtc caccctgaca gcgatgccgg tctactgat 180
 gatgtcactc gacctttcgg acaagatcat caaaggggtg gacaaggtat gtcgtgggtt 240
 cctttggcgt ggtcagaagg acgctaaagg ggggggggca ttgtatggtg gcttgggtcg 300
 tgggtgtgtc gccgaccgct ttcggtggac tcggcgtttc caaatcttcg catcctccca 360
 gccttgaggg tccgctagag gtggcttgag aggggtggacg attccaaacc cgatggtcgg 420
 tttcaagggt gagacgcca gaggtctatg ttatctttga ggcgggccact tcctctttgg 480
 tgggcatggt cgggacgttt ccctcttctg gaccgattgt tggctgcatg gcgtctgttt 540
 tcgagatgcg ttcctgatcc tcgtgggcca tgtttgccac aagtttttgc ttacgcgcac 600
 agtgcgggag gctctgcatg gagcgtggac tggcgacatg ggtccagacc taaagggag 660
 ctactcttga ggacttcact ctctgggact ggcttcgtgg ggtccaactg gaagaaggga 720
 gggccgactc tcttcattgg aactggtgtg gtggtgatag ttactcggca aagactgctt 780
 atgcgaatct tcaactggccg catggttgac ccgttagcgg ctgagagtta gggcttcgga 840
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ttgcgaggcg tgggcttccc caccctgaca agtgtcagga gatggagtcg atttcccatc	960
tactcttggg gtgtgtcttg gcgaggcagg tttgggagcg cttgtgggcg gcttggggac	1020
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ttaccacggc gagcccgag ggacttccgg acggggatca tacttgttct ttggaccatt	1140
tggtgccatt ggaatgatgt ggccttcctt gcagcttgtc gtgcttcgcc tggaggaatt	1200
gtttggtcgg tgggcgacg ccggcctctt taggggtaga gtgtctattc cagccttgat	1260
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cccgtgggt ggcattcttg aaatTTTTTT gagaaaatac tcctacaaag gaagtacagt	1440
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caacgacaaa aatttagtaa cggaggaagt atatatacga agtgatacca aataaggtgt	1620
ttctttactt gaaagctagt tcctctgagg taaaagaaat gatgaggatc aaggaaggcc	1680
catttcttgc cggcacgcag ttgccgaagt cagtagattt aaaatgacct cacatactga	1740
agaaggaaag ggaagttaac cagccattg ttgctttagc agaaagcaac catatcctaa	1800
ttaacatcac agtacacgtt gaaacggcag ggcacgataa ttggtgaaga ctgattccag	1860
ggagcatcgt ggcacgcaaa aacgcccttg ccttgttccc ttataaatag tgggtgcagaa	1920
gatacatttg tgatcaccat ctcaaagcgc ctctttattc ccctttcatc ttgagcttaa	1980
gtactagaga aaaattaagg	2000

<210> 13
 <211> 264
 <212> ADN
 <213> Brachypodium distachyon

<400> 13	
gatgcacgcg acgcgctgct gcttgtggtg tgtgtttgtg tgatctcgac tgaataaaag	60
ggacacggta catccggggg tggttggtgc tcgagtcgag tgtgcaagg tgtgtggttt	120
gccagctctt ggtgtgtgtc tccttgtgct catgtgactt gtgaaacat taatagtaac	180
cactttgtgc ttgtgtgtgt gtgggcacct gtgtttctgt aatggtctat ctggagtga	240
tatatacaag acaggtttgc ctaa	264

<210> 14
 <211> 332
 <212> ADN
 <213> Brachypodium distachyon

<400> 14
 gatgcacgcg acgcgctgct gcttgtggtg tgtgtttgtg tgatctcgac tgaataaaaag 60
 ggacacggta catccgggggt tggttggtgc tcgagtcgag tgtgcaagggt tgtgtggttt 120
 gccagctctt ggtgtgtgtc tccttgtgct catgtgactt gtgaaaccat taatagtaac 180
 cactttgtgc ttgtgtgtgt gtgggcacct gtgtttctgt aatgggtctat ctggagtga 240
 tatatacaag acaggtttgc ctaaccatgc cttttccttc cttgaggtca tcgcgccaac 300
 acgaatgacg agaaccaatg atcttaggac ta 332

<210> 15
 <211> 630
 <212> ADN
 <213> *Brachypodium distachyon*

<400> 15
 gatgcacgcg acgcgctgct gcttgtggtg tgtgtttgtg tgatctcgac tgaataaaaag 60
 ggacacggta catccgggggt tggttggtgc tcgagtcgag tgtgcaagggt tgtgtggttt 120
 gccagctctt ggtgtgtgtc tccttgtgct catgtgactt gtgaaaccat taatagtaac 180
 cactttgtgc ttgtgtgtgt gtgggcacct gtgtttctgt aatgggtctat ctggagtga 240
 tatatacaag acaggtttgc ctaaccatgc cttttccttc cttgaggtca tcgcgccaac 300
 acgaatgacg agaaccaatg atcttaggac tatcaaatac acaatataac tcagcatgga 360
 gcaatgtact gctaataaac ggtcctaata aatacagttg ggaagcagta atcgatggaa 420
 aacacttcct cagttcagaa gggaacatgt agatgggaaa gtaaacagga tatatagaca 480
 catgcagtta ggtctaccac aagaagacat gccacaggac taaaaacaga agctgggttt 540
 ggaacaactt atgcagacgc tagctatcca gataaacctt agagaaacag ctatgagaat 600
 aagcgtctga aattttagt tgctgtttg 630

<210> 16
 <211> 727
 <212> ADN
 <213> *Brachypodium distachyon*

<400> 16
 gatgcacgcg acgcgctgct gcttgtggtg tgtgtttgtg tgatctcgac tgaataaaaag 60
 ggacacggta catccgggggt tggttggtgc tcgagtcgag tgtgcaagggt tgtgtggttt 120
 gccagctctt ggtgtgtgtc tccttgtgct catgtgactt gtgaaaccat taatagtaac 180
 cactttgtgc ttgtgtgtgt gtgggcacct gtgtttctgt aatgggtctat ctggagtga 240
 tatatacaag acaggtttgc ctaaccatgc cttttccttc cttgaggtca tcgcgccaac 300

acgaatgacg agaaccaatg atcttaggac tatcaaatac acaatataac tcagcatgga 360
gcaatgtact gctaataaac ggtcctaatac aatacagttg ggaagcagta atcgatggaa 420
aacacttcct cagttcagaa gggaacatgt agatgggaaa gtaaacagga tatatagaca 480
catgcagtta ggtctaccac aagaagacat gccacaggac taaaaacaga agctggggtt 540
ggaacaactt atgcagacgc tagctatcca gataaacctt agagaaacag ctatgagaat 600
aagcgtctga aatttgtagt tgctgtttg gaatggctta tggacgacaa gcttattttc 660
tggagtagcc tacaagtaca agccaaggca catgctgttc caaactggcc catattttgc 720
acaacca 727

<210> 17
<211> 1000
<212> ADN
<213> Secuencia Artificial

<220>
<223> Versión modificada de la 3'-UTR de un gen similar al de
metalotioneína (mtl) de *Brachypodium distachyon*

<400> 17
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<210> 18
 <211> 1001
 <212> ADN
 <213> Secuencia Artificial

<220>
 <223> Versión modificada de la 3'-UTR de un gen similar al de
 metalotioneína (mtl) de *Brachypodium distachyon*

<400> 18
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 ggacacggta catccggggt tggttggtgc tcgaagttgg tgtgcaaggt tgtgtggttt 120
 gccagctctt ggtgtgtgtc tccttgtgct catgtgactt gtgaaaccat taatagtaac 180
 cactttgtgc ttgtgtgtgt gtgggcacct gtgtttctgt aatggtctat ctggagtga 240
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 acgaatgacg agaaccaatg atcttaggac tatcaaatac acaatataac tcagcatgga 360
 gcaatgtact gctaataaac ggtcctaate aatacagttg ggaagcagta atgtggaaaa 420
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