-continued

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Lys Phe Glu Asn Met Gly Ala Gln Met Val Lys Glu Val Ala Ser Lys
65                  70                  75                  80

Ala Asn Asp Ala Ala Gly Asp Gly Thr Thr Thr Ala Thr Val Leu Ala
                85                  90                  95

Gln Ala Ile Val Thr Glu Gly Leu Lys Ala Val Ala Ala Gly Met Asn
            100                 105                 110

Pro Met Asp Leu Lys Arg Gly Ile Asp Lys Ala Val Val Ser Ala Val
        115                 120                 125

Glu Glu Leu Lys Lys Leu Ser Val Pro Cys Ser Asp Ser Thr Ala Ile
    130                 135                 140

Ala Gln Val Gly Thr Ile Ser Ala Asn Ser Asp Glu Thr Val Gly Lys
145                 150                 155                 160

Leu Ile Ala Glu Ala Met Asp Lys Val Gly Lys Glu Gly Val Ile Thr
                165                 170                 175

Val Glu Glu Gly Thr Gly Leu Glu Asp Glu Leu Asp Val Val Glu Gly
            180                 185                 190

Met Gln Phe Asp Arg Gly Tyr Leu Ser Pro Tyr Phe Ile Asn Lys Pro
        195                 200                 205

Glu Ser Gly Ser Val Glu Leu Glu Asn Pro Tyr Ile Leu Leu Val Asp
    210                 215                 220

Lys Lys Val Ser Asn Ile Arg Glu Leu Leu Pro Val Leu Glu Gly Val
225                 230                 235                 240

Ala Lys Ala Ser Lys Pro Leu Leu Ile Ile Ala Glu Asp Val Glu Gly
                245                 250                 255

Glu Ala Leu Ala Thr Leu Val Val Asn Asn Met Arg Gly Ile Val Lys
            260                 265                 270

Val Ala Ala Val Lys His Gln Val Ser Val Ile Ala Val Lys Gln Cys
        275                 280                 285

Cys Arg Ile Leu Leu Ser
    290
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What is claimed is:

1. A substantially purified polypeptide comprising an amino acid sequence having at least 95% sequence identity with the amino acid sequence of SEQ ID NO:2 or the complement thereof, wherein said polypeptide is a chaperonin.

2. The substantially purified polypeptide of claim **1**, wherein said amino acid sequence has at least 98% sequence identity with the amino acid sequence of SEQ ID NO:2 or the complement thereof.

3. The substantially purified polypeptide of claim **2**, wherein said amino acid sequence is 100% identical with the amino acid sequence of SEQ ID NO:2 or the complement thereof.

4. A substantially purified nucleic acid molecule comprising a nucleic acid sequence encoding the polypeptide of claim **1**, or the complement thereof.

5. The substantially purified nucleic acid molecule of claim **4**, wherein said nucleic acid sequence has at least 95% sequence identity with SEQ ID NO:1.

6. The substantially purified nucleic acid molecule of claim **5**, wherein said nucleic acid sequence has at least 98% sequence identity with SEQ ID NO:1.

7. The substantially purified nucleic acid molecule of claim **6**, wherein said nucleic acid sequence is 100% identical to SEQ ID NO:1.

8. A transformed host cell comprising a polynucleotide that encodes the polypeptide of claim **1**

9. The transformed host cell of claim **8**, wherein said host cell is selected from the group consisting of a plant cell, a mammalian cell, a bacterial cell, an algal cell, an insect cell and a fungal cell.

10. A transgenic plant comprising a polynucleotide that encodes the polypeptide of claim **1**.

11. The transgenic plant of claim **10**, further comprising a 5' non-coding sequence which functions in a plant to cause the production of a mRNA molecule, said 5' non-coding sequence operably linked to said polynucleotide, which is further operably linked to a 3' non-translated sequence that functions in said plant to cause termination of transcription.

12. The transgenic plant of claim **10**, wherein said plant is a monocot or a dicot plant.

13. A seed produced from the plant of claim **10**, wherein said seed comprises said polynucleotide.

14. A progeny plant from the seed of claim **13**, wherein said progeny comprises said polynucleotide.

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