SEQUENCE LISTING

<110> Linnane Pharm AB

<120> Novel Therapy

<130> P3095/WO

<150> GB1617548.1
<151> 2016-10-17

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<170> BiSSAP 1.3.6

<210> 1
<211> 330
<212> PRT
<213> Escherichia coli

<220>
<223> Sigma S protein

<400> 1

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            20                  25                  30
Gln Glu Pro Ser Asp Asn Asp Leu Ala Glu Glu Glu Leu Leu Ser Gln
        35                  40                  45
Gly Ala Thr Gln Arg Val Leu Asp Ala Thr Gln Leu Tyr Leu Gly Glu
    50                  55                  60
Ile Gly Tyr Ser Pro Leu Leu Thr Ala Glu Glu Glu Val Tyr Phe Ala
65                  70                  75                  80
Arg Arg Ala Leu Arg Gly Asp Val Ala Ser Arg Arg Arg Met Ile Glu
                85                  90                  95
Ser Asn Leu Arg Leu Val Val Lys Ile Ala Arg Arg Tyr Gly Asn Arg
            100                 105                 110
Gly Leu Ala Leu Leu Asp Leu Ile Glu Glu Gly Asn Leu Gly Leu Ile
        115                 120                 125
Arg Ala Val Glu Lys Phe Asp Pro Glu Arg Gly Phe Arg Phe Ser Thr
    130                 135                 140
Tyr Ala Thr Trp Trp Ile Arg Gln Thr Ile Glu Arg Ala Ile Met Asn
145                 150                 155                 160
Gln Thr Arg Thr Ile Arg Leu Pro Ile His Ile Val Lys Glu Leu Asn
                165                 170                 175
Val Tyr Leu Arg Thr Ala Arg Glu Leu Ser His Lys Leu Asp His Glu
            180                 185                 190
Pro Ser Ala Glu Glu Ile Ala Glu Gln Leu Asp Lys Pro Val Asp Asp
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        195                 200                 205
Val Ser Arg Met Leu Arg Leu Asn Glu Arg Ile Thr Ser Val Asp Thr
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Pro Leu Gly Gly Asp Ser Glu Lys Ala Leu Leu Asp Ile Leu Ala Asp
225                 230                 235                 240
Glu Lys Glu Asn Gly Pro Glu Asp Thr Thr Gln Asp Asp Asp Met Lys
                245                 250                 255
Gln Ser Ile Val Lys Trp Leu Phe Glu Leu Asn Ala Lys Gln Arg Glu
            260                 265                 270
Val Leu Ala Arg Arg Phe Gly Leu Leu Gly Tyr Glu Ala Ala Thr Leu
        275                 280                 285
Glu Asp Val Gly Arg Glu Ile Gly Leu Thr Arg Glu Arg Val Arg Gln
    290                 295                 300
Ile Gln Val Glu Gly Leu Arg Arg Leu Arg Glu Ile Leu Gln Thr Gln
305                 310                 315                 320
Gly Leu Asn Ile Glu Ala Leu Phe Arg Glu
                325                 330
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<211> 342
<212> PRT
<213> Escherichia coli

<220>
<223> Sigma S protein

<400> 2

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            20                  25                  30
Gly Val Glu Val Phe Asp Glu Lys Ala Leu Val Glu Glu Glu Pro Ser
        35                  40                  45
Asp Asn Asp Leu Ala Glu Glu Glu Leu Leu Ser Gln Gly Ala Thr Gln
    50                  55                  60
Arg Val Leu Asp Ala Thr Gln Leu Tyr Leu Gly Glu Ile Gly Tyr Ser
65                  70                  75                  80
Pro Leu Leu Thr Ala Glu Glu Glu Val Tyr Phe Ala Arg Arg Ala Leu
                85                  90                  95
Arg Gly Asp Val Ala Ser Arg Arg Arg Met Ile Glu Ser Asn Leu Arg
            100                 105                 110
Leu Val Val Lys Ile Ala Arg Arg Tyr Gly Asn Arg Gly Leu Ala Leu
        115                 120                 125
Leu Asp Leu Ile Glu Glu Gly Asn Leu Gly Leu Ile Arg Ala Val Glu
    130                 135                 140
Lys Phe Asp Pro Glu Arg Gly Phe Arg Phe Ser Thr Tyr Ala Thr Trp
145                 150                 155                 160
Trp Ile Arg Gln Thr Ile Glu Arg Ala Ile Met Asn Gln Thr Arg Thr
                165                 170                 175
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```
Ile Arg Leu Pro Ile His Ile Val Lys Glu Leu Asn Val Tyr Leu Arg
            180                 185                 190
Thr Ala Arg Glu Leu Ser His Lys Leu Asp His Glu Pro Ser Ala Glu
        195                 200                 205
Glu Ile Ala Glu Gln Leu Asp Lys Pro Val Asp Asp Val Ser Arg Met
    210                 215                 220
Leu Arg Leu Asn Glu Arg Ile Thr Ser Val Asp Thr Pro Leu Gly Gly
225                 230                 235                 240
Asp Ser Glu Lys Ala Leu Leu Asp Ile Leu Ala Asp Glu Lys Glu Asn
                245                 250                 255
Gly Pro Glu Asp Thr Thr Gln Asp Asp Asp Met Lys Gln Ser Ile Val
            260                 265                 270
Lys Trp Leu Phe Glu Leu Asn Ala Lys Gln Arg Glu Val Leu Ala Arg
        275                 280                 285
Arg Phe Gly Leu Leu Gly Tyr Glu Ala Ala Thr Leu Glu Asp Val Gly
    290                 295                 300
Arg Glu Ile Gly Leu Thr Arg Glu Arg Val Arg Gln Ile Gln Val Glu
305                 310                 315                 320
Gly Leu Arg Arg Leu Arg Glu Ile Leu Gln Thr Gln Gly Leu Asn Ile
                325                 330                 335
Glu Ala Leu Phe Arg Glu
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<210> 3
<211> 35
<212> PRT
<213> Escherichia coli

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Trp Ile Arg Gln Thr Ile Glu Arg Ala Ile Met Asn Gln Thr Arg Thr
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Thr Ala Arg
        35
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<211> 379
<212> PRT
<213> Escherichia coli

<220>
<223> NplD protein

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            20                  25                  30
Pro Ala Pro Val Ser Ser Val Asn Gly Asn Ala Pro Ala Asn Thr Asn
        35                  40                  45
Ser Gly Met Leu Ile Thr Pro Pro Pro Lys Met Gly Thr Thr Ser Thr
    50                  55                  60
Ala Gln Gln Pro Gln Ile Gln Pro Val Gln Gln Pro Gln Ile Gln Ala
65                  70                  75                  80
Thr Gln Gln Pro Gln Ile Gln Pro Met Gln Pro Val Ala Gln Gln Pro
                85                  90                  95
Val Gln Met Glu Asn Gly Arg Ile Val Tyr Asn Arg Gln Tyr Gly Asn
            100                 105                 110
Ile Pro Lys Gly Ser Tyr Ser Gly Ser Thr Tyr Thr Val Lys Lys Gly
        115                 120                 125
Asp Thr Leu Phe Tyr Ile Ala Trp Ile Thr Gly Asn Asp Phe Arg Asp
    130                 135                 140
Leu Ala Gln Arg Asn Asn Ile Gln Ala Pro Tyr Ala Leu Asn Val Gly
145                 150                 155                 160
Gln Thr Leu Gln Val Gly Asn Ala Ser Gly Thr Pro Ile Thr Gly Gly
                165                 170                 175
Asn Ala Ile Thr Gln Ala Asp Ala Ala Glu Gln Gly Val Val Ile Lys
            180                 185                 190
Pro Ala Gln Asn Ser Thr Val Ala Val Ala Ser Gln Pro Thr Ile Thr
        195                 200                 205
Tyr Ser Glu Ser Ser Gly Glu Gln Ser Ala Asn Lys Met Leu Pro Asn
    210                 215                 220
Asn Lys Pro Thr Ala Thr Thr Val Thr Ala Pro Val Thr Val Pro Thr
225                 230                 235                 240
Ala Ser Thr Thr Glu Pro Ile Val Ser Ser Thr Ser Thr Ser Thr Pro
                245                 250                 255
Ile Ser Thr Trp Arg Trp Pro Thr Glu Gly Lys Val Ile Glu Thr Phe
            260                 265                 270
Gly Ala Ser Glu Gly Gly Asn Lys Gly Ile Asp Ile Ala Gly Ser Lys
        275                 280                 285
Gly Gln Ala Ile Ile Ala Thr Ala Asp Gly Arg Val Val Tyr Ala Gly
    290                 295                 300
Asn Ala Leu Arg Gly Tyr Gly Asn Leu Ile Ile Ile Lys His Asn Asp
305                 310                 315                 320
Asp Tyr Leu Ser Ala Tyr Ala His Asn Asp Thr Met Leu Val Arg Glu
                325                 330                 335
Gln Gln Glu Val Lys Ala Gly Gln Lys Ile Ala Thr Met Gly Ser Thr
            340                 345                 350
Gly Thr Ser Ser Thr Arg Leu His Phe Glu Ile Arg Tyr Lys Gly Lys
        355                 360                 365
Ser Val Asn Pro Leu Arg Tyr Leu Pro Gln Arg
    370                 375
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