eolf-seql
SEQUENCE LISTING

<110> GENOVIS AB

<120> METHOD

<130> N400550-WO

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<141> 2014-09-18

<150> GB 1316744.0
<151> 2013-09-20

<160> 7

<170> PatentIn version 3.5

<210> 1
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<212> PRT
<213> Streptococcus pyogenes

<400> 1

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Asp Gln Asn Phe Ala Arg Asn Glu Lys Glu Ala Lys Asp Ser Ala Ile
1               5                   10                  15

Thr Phe Ile Gln Lys Ser Ala Ala Ile Lys Ala Gly Ala Arg Ser Ala
            20                  25                  30

Glu Asp Ile Lys Leu Asp Lys Val Asn Leu Gly Gly Glu Leu Ser Gly
        35                  40                  45

Ser Asn Met Tyr Val Tyr Asn Ile Ser Thr Gly Gly Phe Val Ile Val
    50                  55                  60

Ser Gly Asp Lys Arg Ser Pro Glu Ile Leu Gly Tyr Ser Thr Ser Gly
65                  70                  75                  80

Ser Phe Asp Ala Asn Gly Lys Glu Asn Ile Ala Ser Phe Met Glu Ser
                85                  90                  95

Tyr Val Glu Gln Ile Lys Glu Asn Lys Lys Leu Asp Thr Thr Tyr Ala
            100                 105                 110

Gly Thr Ala Glu Ile Lys Gln Pro Val Val Lys Ser Leu Leu Asp Ser
        115                 120                 125

Lys Gly Ile His Tyr Asn Gln Gly Asn Pro Tyr Asn Leu Leu Thr Pro
    130                 135                 140

Val Ile Glu Lys Val Lys Pro Gly Glu Gln Ser Phe Val Gly Gln His
145                 150                 155                 160

Ala Ala Thr Gly Cys Val Ala Thr Ala Thr Ala Gln Ile Met Lys Tyr
                165                 170                 175
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```
His Asn Tyr Pro Asn Lys Gly Leu Lys Asp Tyr Thr Tyr Thr Leu Ser
            180                 185                 190

Ser Asn Asn Pro Tyr Phe Asn His Pro Lys Asn Leu Phe Ala Ala Ile
        195                 200                 205

Ser Thr Arg Gln Tyr Asn Trp Asn Asn Ile Leu Pro Thr Tyr Ser Gly
    210                 215                 220

Arg Glu Ser Asn Val Gln Lys Met Ala Ile Ser Glu Leu Met Ala Asp
225                 230                 235                 240

Val Gly Ile Ser Val Asp Met Asp Tyr Gly Pro Ser Ser Gly Ser Ala
                245                 250                 255

Gly Ser Ser Arg Val Gln Arg Ala Leu Lys Glu Asn Phe Gly Tyr Asn
            260                 265                 270

Gln Ser Val His Gln Ile Asn Arg Ser Asp Phe Ser Lys Gln Asp Trp
        275                 280                 285

Glu Ala Gln Ile Asp Lys Glu Leu Ser Gln Asn Gln Pro Val Tyr Tyr
    290                 295                 300

Gln Gly Val Gly Lys Val Gly Gly His Ala Phe Val Ile Asp Gly Ala
305                 310                 315                 320

Asp Gly Arg Asn Phe Tyr His Val Asn Trp Gly Trp Gly Gly Val Ser
                325                 330                 335

Asp Gly Phe Phe Arg Leu Asp Ala Leu Asn Pro Ser Ala Leu Gly Thr
            340                 345                 350

Gly Gly Gly Ala Gly Gly Phe Asn Gly Tyr Gln Ser Ala Val Val Gly
        355                 360                 365

Ile Lys Pro
    370
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<212> PRT
<213> Streptococcus pyogenes

<400> 2

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Asp Ser Phe Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro
1               5                   10                  15

Tyr His Val Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn
            20                  25                  30
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```
Phe Thr Gln Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln
        35                  40                  45

Gly Trp Tyr Asp Ile Thr Lys Thr Phe Asn Gly Lys Asp Asp Leu Leu
    50                  55                  60

Cys Gly Ala Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln
65                  70                  75                  80

Asn Lys Asp Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln
                85                  90                  95

Lys Ile Asn Phe Asn Gly Glu Gln Met Phe Asp Val Lys Glu Ala Ile
            100                 105                 110

Asp Thr Lys Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys
        115                 120                 125

Glu Lys Ala Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro
    130                 135                 140

Asp His Val Ile Asp Met Phe Ile Asn Gly Tyr Arg Leu Ser Leu Thr
145                 150                 155                 160

Asn His Gly Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly
                165                 170                 175

Gly Ile Phe Asp Ala Val Phe Thr Arg Gly Asp Gln Ser Lys Leu Leu
            180                 185                 190

Thr Ser Arg His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp
        195                 200                 205

Leu Ile Lys Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His
    210                 215                 220

Thr Tyr Ala Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala
225                 230                 235                 240

Asp Phe Asp Ser Asn Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser
                245                 250                 255

Asp Ser Asn Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn
            260                 265                 270

Ser Ala Gly Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn
        275                 280                 285

Ile Gly Ala Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp
    290                 295                 300
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Ser Trp Asn Gln Thr Asn
305 310

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<213> Homo sapiens

<400> 3

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
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<213> Homo sapiens

<400> 4

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
1 5 10 15

Pro Ser Val Phe
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<210> 5
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<213> Streptococcus pyogenes

<400> 5

Met Ala Asp Gln Asn Phe Ala Arg Asn Glu Lys Glu Ala Lys Asp Ser
1 5 10 15

Ala Ile Thr Phe Ile Gln Lys Ser Ala Ala Ile Lys Ala Gly Ala Arg
20 25 30

Ser Ala Glu Asp Ile Lys Leu Asp Lys Val Asn Leu Gly Gly Glu Leu
35 40 45

Ser Gly Ser Asn Met Tyr Val Tyr Asn Ile Ser Thr Gly Gly Phe Val
50 55 60

Ile Val Ser Gly Asp Lys Arg Ser Pro Glu Ile Leu Gly Tyr Ser Thr
65 70 75 80

Ser Gly Ser Phe Asp Ala Asn Gly Lys Glu Asn Ile Ala Ser Phe Met
85 90 95

Glu Ser Tyr Val Glu Gln Ile Lys Glu Asn Lys Lys Leu Asp Thr Thr
100 105 110

Tyr Ala Gly Thr Ala Glu Ile Lys Gln Pro Val Val Lys Ser Leu Leu
115 120 125

```
Asp Ser Lys Gly Ile His Tyr Asn Gln Gly Asn Pro Tyr Asn Leu Leu
    130                 135                 140

Thr Pro Val Ile Glu Lys Val Lys Pro Gly Glu Gln Ser Phe Val Gly
145                 150                 155                 160

Gln His Ala Ala Thr Gly Cys Val Ala Thr Ala Thr Ala Gln Ile Met
                165                 170                 175

Lys Tyr His Asn Tyr Pro Asn Lys Gly Leu Lys Asp Tyr Thr Tyr Thr
            180                 185                 190

Leu Ser Ser Asn Asn Pro Tyr Phe Asn His Pro Lys Asn Leu Phe Ala
        195                 200                 205

Ala Ile Ser Thr Arg Gln Tyr Asn Trp Asn Asn Ile Leu Pro Thr Tyr
    210                 215                 220

Ser Gly Arg Glu Ser Asn Val Gln Lys Met Ala Ile Ser Glu Leu Met
225                 230                 235                 240

Ala Asp Val Gly Ile Ser Val Asp Met Asp Tyr Gly Pro Ser Ser Gly
                245                 250                 255

Ser Ala Gly Ser Ser Arg Val Gln Arg Ala Leu Lys Glu Asn Phe Gly
            260                 265                 270

Tyr Asn Gln Ser Val His Gln Ile Asn Arg Ser Asp Phe Ser Lys Gln
        275                 280                 285

Asp Trp Glu Ala Gln Ile Asp Lys Glu Leu Ser Gln Asn Gln Pro Val
    290                 295                 300

Tyr Tyr Gln Gly Val Gly Lys Val Gly Gly His Ala Phe Val Ile Asp
305                 310                 315                 320

Gly Ala Asp Gly Arg Asn Phe Tyr His Val Asn Trp Gly Trp Gly Gly
                325                 330                 335

Val Ser Asp Gly Phe Phe Arg Leu Asp Ala Leu Asn Pro Ser Ala Leu
            340                 345                 350

Gly Thr Gly Gly Gly Ala Gly Gly Phe Asn Gly Tyr Gln Ser Ala Val
        355                 360                 365

Val Gly Ile Lys Pro
    370
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<210> 6
<211> 339
<212> PRT

<213> Streptococcus pyogenes

<400> 6

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Met Arg Lys Arg Cys Tyr Ser Thr Ser Ala Ala Val Leu Ala Ala Val
1               5                  10                  15

Thr Leu Phe Val Leu Ser Val Asp Arg Gly Val Ile Ala Asp Ser Phe
            20                  25                  30

Ser Ala Asn Gln Glu Ile Arg Tyr Ser Glu Val Thr Pro Tyr His Val
        35                  40                  45

Thr Ser Val Trp Thr Lys Gly Val Thr Pro Pro Ala Asn Phe Thr Gln
    50                  55                  60

Gly Glu Asp Val Phe His Ala Pro Tyr Val Ala Asn Gln Gly Trp Tyr
65                  70                  75                  80

Asp Ile Thr Lys Thr Phe Asn Gly Lys Asp Asp Leu Leu Cys Gly Ala
                85                  90                  95

Ala Thr Ala Gly Asn Met Leu His Trp Trp Phe Asp Gln Asn Lys Asp
            100                 105                 110

Gln Ile Lys Arg Tyr Leu Glu Glu His Pro Glu Lys Gln Lys Ile Asn
        115                 120                 125

Phe Asn Gly Glu Gln Met Phe Asp Val Lys Glu Ala Ile Asp Thr Lys
    130                 135                 140

Asn His Gln Leu Asp Ser Lys Leu Phe Glu Tyr Phe Lys Glu Lys Ala
145                 150                 155                 160

Phe Pro Tyr Leu Ser Thr Lys His Leu Gly Val Phe Pro Asp His Val
                165                 170                 175

Ile Asp Met Phe Ile Asn Gly Tyr Arg Leu Ser Leu Thr Asn His Gly
            180                 185                 190

Pro Thr Pro Val Lys Glu Gly Ser Lys Asp Pro Arg Gly Gly Ile Phe
        195                 200                 205

Asp Ala Val Phe Thr Arg Gly Asp Gln Ser Lys Leu Leu Thr Ser Arg
    210                 215                 220

His Asp Phe Lys Glu Lys Asn Leu Lys Glu Ile Ser Asp Leu Ile Lys
225                 230                 235                 240

Lys Glu Leu Thr Glu Gly Lys Ala Leu Gly Leu Ser His Thr Tyr Ala
                245                 250                 255
```

```
Asn Val Arg Ile Asn His Val Ile Asn Leu Trp Gly Ala Asp Phe Asp
            260                 265                 270

Ser Asn Gly Asn Leu Lys Ala Ile Tyr Val Thr Asp Ser Asp Ser Asn
        275                 280                 285

Ala Ser Ile Gly Met Lys Lys Tyr Phe Val Gly Val Asn Ser Ala Gly
    290                 295                 300

Lys Val Ala Ile Ser Ala Lys Glu Ile Lys Glu Asp Asn Ile Gly Ala
305                 310                 315                 320

Gln Val Leu Gly Leu Phe Thr Leu Ser Thr Gly Gln Asp Ser Trp Asn
                325                 330                 335

Gln Thr Asn
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<210> 7
<211> 451
<212> PRT
<213> Homo sapiens

<400> 7

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Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Ile Lys Asp Thr
            20                  25                  30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ala Arg Ile Tyr Pro Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn Thr Ala Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ser Arg Trp Gly Gly Asp Gly Phe Tyr Ala Met Asp Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
        115                 120                 125

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
    130                 135                 140

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
```

```
145                 150                 155                 160

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Pro Lys Ser Cys
    210                 215                 220

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
225                 230                 235                 240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                245                 250                 255

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
            260                 265                 270

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        275                 280                 285

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
    290                 295                 300

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
305                 310                 315                 320

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
                325                 330                 335

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
            340                 345                 350

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
        355                 360                 365

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
    370                 375                 380

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385                 390                 395                 400

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
                405                 410                 415

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
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                                    eolf-seql
            420                 425                 430

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
        435                 440                 445

Pro Gly Lys
    450
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