SEQUENCE LISTING

<110> Zhang, Shuguang
Rich, Alexander
Corin, Karolina
Tegler, Lotta T.

<120> Water Soluble Membrane Proteins and
Methods for the Preparation and Use Thereof

<130> 4041.3017 WO

<140> 13/403,725
<141> 2012-02-23

<150> US 61/445,740
<151> 2011-02-23

<160> 10

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 340
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 1

```
Met Glu Arg Arg Asn His Thr Gly Arg Val Ser Glu Phe Val Leu Leu
 1               5                  10                  15
Gly Phe Pro Ala Pro Ala Pro Leu Arg Ala Leu Leu Phe Phe Leu Ser
            20                  25                  30
Leu Leu Ala Tyr Val Leu Val Leu Thr Glu Asn Ile Leu Ile Thr Ala
        35                  40                  45
Ile Arg Asn His Pro Thr Leu His Lys Pro Met Tyr Phe Phe Leu Ala
    50                  55                  60
Asn Met Ser Glu Phe Leu Glu Ile Trp Tyr Val Thr Val Thr Ile Pro
65                  70                  75                  80
Lys Met Leu Ala Gly Phe Ile Gly Ser Glu Glu Asn His Gly Gln Leu
                85                  90                  95
Ile Ser Phe Glu Ala Cys Met Thr Gln Leu Tyr Phe Phe Leu Gly Leu
            100                 105                 110
Gly Cys Thr Glu Cys Val Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr
        115                 120                 125
Val Ala Ile Cys His Pro Leu His Tyr Pro Val Ile Val Ser Ser Arg
    130                 135                 140
Leu Cys Val Gln Met Ala Ala Gly Ser Trp Ala Gly Gly Phe Gly Ile
145                 150                 155                 160
Ser Met Val Lys Val Phe Leu Ile Ser Arg Leu Tyr Thr Cys Gly Pro
                165                 170                 175
Asn Thr Ile Asn His Phe Phe Cys Asp Val Ser Pro Leu Leu Asn Leu
            180                 185                 190
Ser Cys Thr Asp Met Ser Thr Ala Glu Leu Thr Asp Phe Ile Leu Ala
        195                 200                 205
Ile Phe Ile Leu Leu Gly Pro Leu Ser Val Thr Gly Ala Ser Tyr Met
    210                 215                 220
Ala Ile Thr Gly Ala Val Met Arg Ile Pro Ser Ala Ala Gly Arg His
225                 230                 235                 240
Lys Ala Phe Ser Thr Cys Ala Ser His Leu Thr Val Val Ile Ile Phe
                245                 250                 255
Tyr Ala Ala Ser Ile Phe Ile Tyr Ala Arg Pro Lys Ala Leu Ser Ala
            260                 265                 270
```

```
Phe Asp Thr Asn Lys Leu Val Ser Val Leu Tyr Ala Val Ile Val Pro
        275                 280                 285
Leu Leu Asn Pro Ile Ile Tyr Cys Leu Arg Asn Gln Glu Val Lys Lys
    290                 295                 300
Ala Leu Arg Arg Thr Leu His Leu Ala Gln Gly Gln Asp Ala Asn Thr
305                 310                 315                 320
Lys Lys Ser Ser Arg Asp Gly Gly Ser Ser Gly Thr Glu Thr Ser Gln
                325                 330                 335
Val Ala Pro Ala
            340
```

<210> 2
<211> 341
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 2

```
Met Glu Arg Arg Asn His Thr Gly Arg Val Ser Glu Phe Val Leu Leu
 1               5                  10                  15
Gly Phe Pro Ala Pro Ala Pro Gln Arg Ala Leu Gln Phe Phe Gln Ser
            20                  25                  30
Leu Gln Ala Tyr Val Gln Thr Leu Thr Glu Asn Ile Gln Thr Ile Thr
        35                  40                  45
Ala Ile Arg Asn His Pro Thr Leu His Lys Pro Met Tyr Tyr Phe Leu
    50                  55                  60
Ala Asn Met Ser Phe Tyr Leu Glu Thr Trp Tyr Thr Thr Val Thr Thr
65                  70                  75                  80
Pro Lys Met Gln Ala Gly Tyr Ile Gly Ser Glu Glu Asn His Gly Gln
                85                  90                  95
Leu Ile Ser Phe Glu Ala Cys Met Thr Gln Leu Tyr Phe Phe Gln Gly
            100                 105                 110
Leu Gly Cys Thr Glu Cys Thr Leu Leu Ala Val Met Ala Tyr Asp Arg
        115                 120                 125
Tyr Val Ala Thr Cys His Pro Leu His Tyr Pro Val Ile Val Ser Ser
    130                 135                 140
Arg Gln Cys Val Gln Met Ala Ala Gly Ser Trp Ala Gly Gly Phe Gly
145                 150                 155                 160
Thr Ser Met Thr Val Lys Val Tyr Gln Ile Ser Arg Leu Ser Tyr Cys
                165                 170                 175
Gly Pro Asn Thr Ile Asn His Phe Phe Cys Asp Val Ser Pro Leu Leu
            180                 185                 190
Asn Leu Ser Cys Thr Asp Met Ser Thr Ala Glu Leu Thr Asp Phe Ile
        195                 200                 205
Leu Ala Ile Phe Ile Leu Leu Gly Pro Leu Ser Val Thr Gly Ala Ser
    210                 215                 220
Tyr Met Ala Ile Thr Gly Ala Val Met Arg Ile Pro Ser Ala Ala Gly
225                 230                 235                 240
Arg His Lys Ala Phe Ser Thr Cys Ala Ser His Leu Thr Thr Val Ile
                245                 250                 255
Thr Tyr Tyr Ala Ala Ser Ile Tyr Thr Tyr Ala Arg Pro Lys Ala Leu
            260                 265                 270
Ser Ala Phe Asp Thr Asn Lys Leu Val Ser Val Leu Tyr Ala Val Ile
        275                 280                 285
Val Pro Leu Leu Asn Pro Ile Ile Tyr Cys Leu Arg Asn Gln Glu Val
    290                 295                 300
Lys Lys Ala Leu Arg Arg Thr Leu His Leu Ala Gln Gly Asp Ala Asn
305                 310                 315                 320
Thr Lys Lys Ser Ser Arg Asp Gly Gly Ser Ser Gly Thr Glu Thr Ser
                325                 330                 335
Gln Val Ala Pro Ala
            340
```

<210> 3

<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 3
Pro Gln Arg Ala Leu Gln Phe Phe Gln Ser Leu Gln Ala Tyr Val Gln
 1   5   10   15
Thr Leu Thr Glu Asn Ile Gln Thr Ile Thr Ala Ile Arg
            20   25

<210> 4
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 4
Met Tyr Tyr Phe Leu Ala Asn Met Ser Phe Tyr Leu Glu Thr Trp Tyr
 1   5   10   15
Thr Thr Val Thr Thr Pro Lys Met Gln Ala Gly Tyr Ile
            20   25

<210> 5
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 5
Cys Met Thr Gln Leu Tyr Phe Phe Gln Gly Leu Gly Cys Thr Glu Cys
 1   5   10   15
Thr Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Thr Cys
            20   25   30

<210> 6
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 6
Arg Gln Cys Val Gln Met Ala Ala Gly Ser Trp Ala Gly Gly Phe Gly
 1   5   10   15
Thr Ser Met Thr Val Lys Val Tyr Gln
            20   25

<210> 7
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 7

Leu Thr Asp Phe Ile Leu Ala Ile Phe Ile Leu Leu Gly Pro Leu Ser
1 5 10 15
Val Thr Gly Ala Ser Tyr Met Ala Ile Thr Gly Ala Val
20 25

<210> 8
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 8
His Lys Ala Phe Ser Thr Cys Ala Ser His Leu Thr Thr Val Ile Thr
1 5 10 15
Tyr Tyr Ala Ala Ser Ile Tyr Thr Tyr
20 25

<210> 9
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 9
Thr Asn Lys Leu Val Ser Val Leu Tyr Ala Val Ile Val Pro Leu Leu
1 5 10 15
Asn Pro Ile Ile Tyr Cys Leu Arg Asn
20 25

<210> 10
<211> 352
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 10

Met Glu Gly Ile Ser Ile Tyr Thr Ser Asp Asn Tyr Thr Glu Glu Met
1 5 10 15

Gly Ser Gly Asp Tyr Asp Ser Met Lys Glu Pro Cys Phe Arg Glu Glu
20 25 30

Asn Ala Asn Tyr Asn Lys Thr Phe Leu Pro Thr Ile Tyr Ser Ile Ile
35 40 45

Tyr Gln Thr Gly Thr Val Gly Asn Gly Leu Val Ile Leu Val Met Gly
50 55 60

Tyr Gln Lys Lys Leu Arg Ser Met Thr Asp Lys Tyr Arg Leu His Leu
65 70 75 80

Ser Thr Ala Asp Leu Gln Phe Val Thr Thr Leu Pro Tyr Trp Ala Thr
85 90 95

Asp Ala Thr Ala Asn Trp Tyr Phe Gly Asn Phe Leu Cys Lys Ala Val
100 105 110

His Val Ile Tyr Thr Val Asn Leu Tyr Ser Ser Val Leu Ile Leu Ala
115 120 125

Phe Ile Ser Leu Asp Arg Tyr Leu Ala Ile Val His Ala Thr Asn Ser
130 135 140

Gln Arg Pro Arg Lys Leu Leu Ala Glu Lys Val Val Tyr Val Gly Val
145 150 155 160

Trp Thr Pro Ala Gln Leu Leu Thr Thr Pro Asp Tyr Thr Phe Ala Asn
165 170 175

Val Ser Glu Ala Asp Asp Arg Tyr Ile Cys Asp Arg Phe Tyr Pro Asn
180 185 190

Asp Leu Trp Val Val Val Phe Gln Phe Gln His Ile Met Val Gly Leu
195 200 205

Ile Leu Pro Gly Ile Val Ile Leu Ser Cys Tyr Cys Ile Ile Ile Ser
210 215 220

Lys Leu Ser His Ser Lys Gly His Gln Lys Arg Lys Ala Leu Lys Thr
225 230 235 240

Thr Thr Thr Leu Ile Gln Ala Phe Phe Ala Cys Trp Gln Pro Tyr Tyr
245 250 255

Thr Gly Ile Ser Ile Asp Ser Tyr Ile Leu Leu Glu Ile Ile Lys Gln
260 265 270

Gly Cys Glu Phe Glu Asn Thr Val His Lys Trp Ile Ser Thr Thr Glu
275 280 285

Ala Gln Ala Phe Tyr His Cys Cys Thr Asn Pro Thr Gln Tyr Ala Tyr
290 295 300

Leu Gly Ala Lys Phe Lys Thr Ser Ala Gln His Ala Leu Thr Ser Val
305 310 315 320

Ser Arg Gly Ser Ser Leu Lys Ile Leu Ser Lys Gly Lys Arg Gly Gly
325 330 335

His Ser Ser Val Ser Thr Glu Ser Glu Ser Ser Ser Ser Phe His Ser
340 345 350