SEQUENCE LISTING

<110> MEDIMMUNE, LLC

<120> METHODS FOR TREATING CHRONIC OBSTRUCTIVE PULMONARY DISEASE USING BENRALIZUMAB

<130> IL5R-606WO1

<140>
<141>

<150> 61/970,126
<151> 2014-03-25

<150> 61/891,175
<151> 2013-10-15

<160> 12

<170> PatentIn version 3.5

<210> 1
<211> 107
<212> PRT
<213> Homo sapiens

<400> 1
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10

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Asp Arg Val Thr Ile Thr Cys Gly Thr Ser
Glu Asp Ile Ile Asn Tyr
             20                  25
            30


Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys
Ala Pro Lys Leu Leu Ile
         35                  40
        45


Tyr His Thr Ser Arg Leu Gln Ser Gly Val
Pro Ser Arg Phe Ser Gly
     50                  55
    60


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
Ile Ser Ser Leu Gln Pro
65                  70
75                  80


Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
Gly Tyr Thr Leu Pro Tyr
                 85                  90
                95
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Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 2
<211> 214
<212> PRT
<213> Homo sapiens

<400> 2
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Gly Thr Ser Glu Asp Ile Ile Asn Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr His Thr Ser Arg Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55

60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
Ile Ser Ser Leu Gln Pro
65 70
75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
Gly Tyr Thr Leu Pro Tyr
85 90
95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
Lys Arg Thr Val Ala Ala
100 105
110

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

Thr Ala Ser Val Val Cys Leu Leu Asn Asn
Phe Tyr Pro Arg Glu Ala
130 135
140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu
Gln Ser Gly Asn Ser Gln
145 150
155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp
Ser Thr Tyr Ser Leu Ser
165 170
175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr
Glu Lys His Lys Val Tyr
180 185
190

Ala Cys Glu Val Thr His Gln Gly Leu Ser
Ser Pro Val Thr Lys Ser
195 200
205

Phe Asn Arg Gly Glu Cys
210

<210> 3
<211> 121
<212> PRT
<213> Homo sapiens

<400> 3

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Val Ile His Trp Val Arg Gln Arg Pro Gly Gln Gly Leu Ala Trp Met
35 40 45

Gly Tyr Ile Asn Pro Tyr Asn Asp Gly Thr Lys Tyr Asn Glu Arg Phe
50 55 60

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

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Leu Cys

85 90
95

Gly Arg Glu Gly Ile Arg Tyr Tyr Gly Leu
Leu Gly Asp Tyr Trp Gly
100 105
110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 4
<211> 451
<212> PRT
<213> Homo sapiens

<400> 4
Glu Val Gln Leu Val Gln Ser Gly Ala Glu
Val Lys Lys Pro Gly Ala
1 5 10
15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly
Tyr Thr Phe Thr Ser Tyr
20 25
30

Val Ile His Trp Val Arg Gln Arg Pro Gly

Gln Gly Leu Ala Trp Met
35 40
45

Gly Tyr Ile Asn Pro Tyr Asn Asp Gly Thr
Lys Tyr Asn Glu Arg Phe
50 55
60

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

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

Gly Arg Glu Gly Ile Arg Tyr Tyr Gly Leu
Leu Gly Asp Tyr Trp Gly
100 105
110

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

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


Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe
Pro Glu Pro Val Thr Val
145                 150
155                 160


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


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


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


Lys Pro Ser Asn Thr Lys Val Asp Lys Lys
```

```
Val Glu 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
            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


<210> 5
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<212> PRT
<213> Homo sapiens

<400> 5
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Asp Leu Leu Pro Asp Glu Lys Ile Ser Leu
Leu Pro Pro Val Asn Phe
1 5 10
15

Thr Ile Lys Val Thr Gly Leu Ala Gln Val
Leu Leu Gln Trp Lys Pro
20 25
30

Asn Pro Asp Gln Glu Gln Arg Asn Val Asn
Leu Glu Tyr Gln Val Lys
35 40
45

Ile Asn Ala Pro Lys Glu Asp Asp Tyr Glu
Thr Arg Ile Thr Glu Ser
50 55
60

Lys Cys Val Thr Ile Leu His Lys Gly Phe
Ser Ala Ser Val Arg Thr
65 70
75 80

Ile Leu Gln Asn Asp His Ser Leu Leu Ala
Ser Ser Trp Ala Ser Ala
85 90

Glu Leu His Ala Pro Pro Gly Ser Pro Gly
Thr Ser Ile Val Asn Leu
100 105
110

Thr Cys Thr Thr Asn Thr Thr Glu Asp Asn
Tyr Ser Arg Leu Arg Ser
115 120
125

Tyr Gln Val Ser Leu His Cys Thr Trp Leu
Val Gly Thr Asp Ala Pro
130 135
140

Glu Asp Thr Gln Tyr Phe Leu Tyr Tyr Arg
Tyr Gly Ser Trp Thr Glu
145 150
155 160

Glu Cys Gln Glu Tyr Ser Lys Asp Thr Leu
Gly Arg Asn Ile Ala Cys
165 170
175

```
Trp Phe Pro Arg Thr Phe Ile Leu Ser Lys
Gly Arg Asp Trp Leu Ala
            180                 185
           190


Val Leu Val Asn Gly Ser Ser Lys His Ser
Ala Ile Arg Pro Phe Asp
        195                 200
       205


Gln Leu Phe Ala Leu His Ala Ile Asp Gln
Ile Asn Pro Pro Leu Asn
    210                 215
   220


Val Thr Ala Glu Ile Glu Gly Thr Arg Leu
Ser Ile Gln Trp Glu Lys
225                 230
235                 240


Pro Val Ser Ala Phe Pro Ile His Cys Phe
Asp Tyr Glu Val Lys Ile
                245                 250
               255


His Asn Thr Arg Asn Gly Tyr Leu Gln Ile
Glu Lys Leu Met Thr Asn
            260                 265
```

270

Ala Phe Ile Ser Ile Ile Asp Asp Leu Ser
Lys Tyr Asp Val Gln Val
275 280
285

Arg Ala Ala Val Ser Ser Met Cys Arg Glu
Ala Gly Leu Trp Ser Glu
290 295
300

Trp Ser Gln Pro Ile Tyr Val Gly Asn Asp
Glu His Lys Pro Leu Arg
305 310
315 320

Glu Trp Phe Val Ile Val Ile Met Ala Thr
Ile Cys Phe Ile Leu Leu
325 330
335

Ile Leu Ser Leu Ile Cys Lys Ile Cys His
Leu Trp Ile Lys Leu Phe
340 345
350

```
Pro Pro Ile Pro Ala Pro Lys Ser Asn Ile
Lys Asp Leu Phe Val Thr
         355                 360
        365


Thr Asn Tyr Glu Lys Ala Gly Ser Ser Glu
Thr Glu Ile Glu Val Ile
    370                 375
   380


Cys Tyr Ile Glu Lys Pro Gly Val Glu Thr
Leu Glu Asp Ser Val Phe
385                 390
395                 400


<210> 6
<211> 398
<212> PRT
<213> Mus musculus

<400> 6
Asp Leu Leu Asn His Lys Lys Phe Leu Leu
Leu Pro Pro Val Asn Phe
1               5                   10
               15


Thr Ile Lys Ala Thr Gly Leu Ala Gln Val
Leu Leu His Trp Asp Pro
            20                  25
```

30

Asn Pro Asp Gln Glu Gln Arg His Val Asp
Leu Glu Tyr His Val Lys
35 40
45

Ile Asn Ala Pro Gln Glu Asp Glu Tyr Asp
Thr Arg Lys Thr Glu Ser
50 55
60

Lys Cys Val Thr Pro Leu His Glu Gly Phe
Ala Ala Ser Val Arg Thr
65 70
75 80

Ile Leu Lys Ser Ser His Thr Thr Leu Ala
Ser Ser Trp Val Ser Ala
85 90
95

Glu Leu Lys Ala Pro Pro Gly Ser Pro Gly
Thr Ser Val Thr Asn Leu
100 105
110

Thr Cys Thr Thr His Thr Val Val Ser Ser
His Thr His Leu Arg Pro
115 120
125

Tyr Gln Val Ser Leu Arg Cys Thr Trp Leu
Val Gly Lys Asp Ala Pro
130 135
140

Glu Asp Thr Gln Tyr Phe Leu Tyr Tyr Arg
Phe Gly Val Leu Thr Glu
145 150
155 160

Lys Cys Gln Glu Tyr Ser Arg Asp Ala Leu
Asn Arg Asn Thr Ala Cys
165 170
175

Trp Phe Pro Arg Thr Phe Ile Asn Ser Lys
Gly Phe Glu Gln Leu Ala
180 185
190

Val His Ile Asn Gly Ser Ser Lys Arg Ala
Ala Ile Lys Pro Phe Asp
195 200

205

Gln Leu Phe Ser Pro Leu Ala Ile Asp Gln
Val Asn Pro Pro Arg Asn
210 215
220

Val Thr Val Glu Ile Glu Ser Asn Ser Leu
Tyr Ile Gln Trp Glu Lys
225 230
235 240

Pro Leu Ser Ala Phe Pro Asp His Cys Phe
Asn Tyr Glu Leu Lys Ile
245 250
255

Tyr Asn Thr Lys Asn Gly His Ile Gln Lys
Glu Lys Leu Ile Ala Asn
260 265
270

Lys Phe Ile Ser Lys Ile Asp Asp Val Ser
Thr Tyr Ser Ile Gln Val
275 280
285

```
Arg Ala Ala Val Ser Ser Pro Cys Arg Met
Pro Gly Arg Trp Gly Glu
    290                 295
   300


Trp Ser Gln Pro Ile Tyr Val Gly Lys Glu
Arg Lys Ser Leu Val Glu
305                 310
315                 320


Trp His Leu Ile Val Leu Pro Thr Ala Ala
Cys Phe Val Leu Leu Ile
                325                 330
               335


Phe Ser Leu Ile Cys Arg Val Cys His Leu
Trp Thr Arg Leu Phe Pro
            340                 345
           350


Pro Val Pro Ala Pro Lys Ser Asn Ile Lys
Asp Leu Pro Val Val Thr
        355                 360
       365


Glu Tyr Glu Lys Pro Ser Asn Glu Thr Lys
Ile Glu Val Val His Cys
    370                 375
```

380

Val Glu Glu Val Gly Phe Glu Val Met Gly
Asn Ser Thr Phe
385 390
395

<210> 7
<211> 5
<212> PRT
<213> Homo sapiens

<400> 7
Ser Tyr Val Ile His
1 5

<210> 8
<211> 17
<212> PRT
<213> Homo sapiens

<400> 8
Tyr Ile Asn Pro Tyr Asn Asp Gly Thr Lys
Tyr Asn Glu Arg Phe Lys
1 5 10
15

Gly

<210> 9
<211> 12
<212> PRT
<213> Homo sapiens

<400> 9
Glu Gly Ile Arg Tyr Tyr Gly Leu Leu Gly Asp Tyr
1 5 10

<210> 10
<211> 11
<212> PRT
<213> Homo sapiens

<400> 10
Gly Thr Ser Glu Asp Ile Ile Asn Tyr Leu Asn
1 5 10

<210> 11
<211> 7
<212> PRT
<213> Homo sapiens

<400> 11
His Thr Ser Arg Leu Gln Ser

1 5

<210> 12
<211> 9
<212> PRT
<213> Homo sapiens

<400> 12
Gln Gln Gly Tyr Thr Leu Pro Tyr Thr
1 5