<110> GENENTECH, INC. ET AL.

<120> FGFR1 AGONISTS AND METHODS OF USE

<130> P4653R1WO

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<150> 61/536,936
<151> 2011-09-20

<150> 61/486,731
<151> 2011-05-16

<160> 63

<170> PatentIn version 3.5

<210> 1
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<213> Homo sapiens

<400> 1

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Asn Thr Lys Pro Asn Pro Val Ala Pro Tyr Trp Thr Ser Pro Glu Lys
1               5                  10                  15

Met Glu Lys Lys Leu His Ala Val Pro Ala Ala Lys Thr Val Lys Phe
            20                  25                  30

Lys Cys Pro Ser Ser Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys
        35                  40                  45

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

Arg Tyr Ala Thr Trp Ser Ile Ile Met Asp Ser Val Val Pro Ser Asp
65                  70                  75                  80

Lys Gly Asn Tyr Thr Cys Ile Val Glu Asn Glu Tyr Gly Ser Ile Asn
                85                  90                  95

His Thr Tyr Gln Leu Asp Val Val Glu Arg Ser Pro His Arg Pro Ile
            100                 105                 110

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

Val Glu Phe Met Cys Lys Val Tyr Ser Asp Pro Gln Pro His Ile Gln
    130                 135                 140

Trp Leu Lys His Ile Glu Val Asn Gly Ser Lys Ile Gly Pro Asp Asn
145                 150                 155                 160

Leu Pro Tyr Val Gln Ile Leu Lys His Ser Gly Ile Asn Ser Ser Asp
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165 170 175

Ala Glu Val Leu Thr Leu Phe Asn Val Thr Glu Ala Gln Ser Gly Glu
180 185 190

Tyr Val Cys Lys Val Ser Asn Tyr Ile Gly Glu Ala Asn Gln Ser Ala
195 200 205

Trp Leu Thr Val Thr Arg Pro Val Ala Lys Ala Leu Glu Glu Arg Pro
210 215 220

Ala Val Met Thr Ser
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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 Thr Phe Thr Ser Thr
20 25 30

Trp Ile Ser Trp Val Pro Gly Lys Gly Leu Glu Trp Val Gly Glu Ile
35 40 45

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

Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn Leu Gln Met Asn Ser Leu
65 70 75 80

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

Gly Ser Asp Tyr Ala Met Asp Tyr Trp Gly Gln
100 105

<210> 3
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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 Thr Phe Ser Asn Asn
20 25 30

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

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

Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn Leu Gln Met Asn Ser Leu
65 70 75 80

Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Glu His Phe Asp
85 90 95

Ala Trp Val His Tyr Tyr Val Met Asp Tyr Trp Gly Gln
100 105

<210> 4
<211> 102
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<213> Artificial Sequence

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<400> 4
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 Thr Phe Thr Ser Asn
20 25 30

Trp Ile Ser Trp Val Pro Gly Lys Gly Leu Glu Trp Val Ala Glu Ile
35 40 45

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

Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn Leu Gln Met Asn Ser Leu
65 70 75 80

Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Thr Gly Thr Asp Val
85 90 95

Met Asp Tyr Trp Gly Gln
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<210> 5
<211> 227
<212> PRT
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<400> 5

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Asn Thr Lys Pro Asn Pro Val Ala Pro Tyr Trp Thr Ser Pro Glu Lys
1               5                  10                  15

Met Glu Lys Lys Leu His Ala Val Pro Ala Ala Lys Thr Val Lys Phe
            20                  25                  30

Lys Cys Pro Ser Ser Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys
        35                  40                  45

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

Arg Tyr Ala Thr Trp Ser Ile Ile Met Asp Ser Val Val Pro Ser Asp
65                  70                  75                  80

Lys Gly Asn Tyr Thr Cys Ile Val Glu Asn Glu Tyr Gly Ser Ile Asn
                85                  90                  95

His Thr Tyr Gln Leu Asp Val Val Glu Arg Ser Pro His Arg Pro Ile
            100                 105                 110

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

Val Glu Phe Met Cys Lys Val Tyr Ser Asp Pro Gln Pro His Ile Gln
    130                 135                 140

Trp Leu Lys His Ile Glu Val Asn Gly Ser Lys Ile Gly Pro Asp Asn
145                 150                 155                 160

Leu Pro Tyr Val Gln Ile Leu Lys Thr Ala Gly Val Asn Thr Thr Asp
                165                 170                 175

Lys Glu Met Glu Val Leu His Leu Arg Asn Val Ser Phe Glu Asp Ala
            180                 185                 190

Gly Glu Tyr Thr Cys Leu Ala Gly Asn Ser Ile Gly Leu Ser His His
        195                 200                 205

Ser Ala Trp Leu Thr Val Leu Glu Ala Leu Glu Glu Arg Pro Ala Val
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Met Thr Ser
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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 Arg Ala Ser Gln Asp Val Ser Thr Ala
20 25 30

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

Tyr Ser Ala Ser Phe Leu Tyr 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 Ser Tyr Thr Thr Pro Pro
85 90 95

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

<210> 7
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<213> Artificial Sequence

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<400> 7
Gly Phe Thr Phe Thr Ser Thr Trp Ile Ser
1 5 10

<210> 8
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 8
Gly Phe Thr Phe Ser Asn Asn Tyr Ile His
1 5 10

<210> 9

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

<220>
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<400> 9
Gly Phe Thr Phe Thr Ser Asn Trp Ile Ser
1 5 10

<210> 10
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 10
Gly Glu Ile Asp Pro Tyr Asp Gly Asp Thr Tyr Tyr Ala Asp Ser Val
1 5 10 15

Lys Gly

<210> 11
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 11
Glu Ile Asp Pro Tyr Asp Gly Asp Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 12
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 12
Ala Asp Ile Tyr Pro Asn Asp Gly Asp Thr Asp Tyr Ala Asp Ser Val
1 5 10 15

Lys Gly

<210> 13
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 13
Asp Ile Tyr Pro Asn Asp Gly Asp Thr Asp Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 14
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 14
Ala Glu Ile Asp Pro Tyr Asp Gly Ala Thr Asp Tyr Ala Asp Ser Val
1 5 10 15

Lys Gly

<210> 15
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 15
Glu Ile Asp Pro Tyr Asp Gly Ala Thr Asp Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 16
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic

peptide"

<400> 16
Ser Ser Gly Tyr Gly Gly Ser Asp Tyr Ala Met Asp Tyr
1 5 10

<210> 17
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<400> 17
Ser Gly Tyr Gly Gly Ser Asp Tyr Ala Met Asp Tyr
1 5 10

<210> 18
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<212> PRT
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 18
Glu His Phe Asp Ala Trp Val His Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 19
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 19
Thr Gly Thr Asp Val Met Asp Tyr
1 5

<210> 20
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 20
Gly Thr Asp Val Met Asp Tyr
1 5

<210> 21

<211> 11
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<400> 21
Arg Ala Ser Gln Asp Val Ser Thr Ala Val Ala
1 5 10

<210> 22
<211> 7
<212> PRT
<213> Artificial Sequence

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<400> 22
Ser Ala Ser Phe Leu Tyr Ser
1 5

<210> 23
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 23
Gln Gln Ser Tyr Thr Thr Pro Pro Thr
1 5

<210> 24
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

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<222> (1)..(1)
<223> /replace="Gly"

<220>
<221> VARIANT
<222> (2)..(2)
<223> /replace="Glu"

<220>
<221> misc_feature
<222> (1)..(2)

<223> /note="Residues given in the sequence have no preference
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<220>
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<222> (4)..(4)
<223> /replace="Tyr"

<220>
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<223> /note="Residue given in the sequence has no preference
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<220>
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<222> (6)..(6)
<223> /replace="Tyr"

<220>
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<222> (6)..(6)
<223> /note="Residue given in the sequence has no preference
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<223> /replace="Asp"

<220>
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<222> (9)..(9)
<223> /note="Residue given in the sequence has no preference
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<223> /replace="Tyr"

<220>
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<222> (11)..(11)
<223> /note="Residue given in the sequence has no preference
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<400> 24
Ala Asp Ile Asp Pro Asn Asp Gly Ala Thr Asp Tyr Ala Asp Ser Val
1 5 10 15

Lys Gly

<210> 25
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
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<220>

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<222> (1)..(1)
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<220>
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<223> /replace="Tyr"

<220>
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<222> (5)..(5)
<223> /note="Residue given in the sequence has no preference
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<223> /replace="Asp"

<220>
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<222> (8)..(8)
<223> /note="Residue given in the sequence has no preference
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<222> (10)..(10)
<223> /replace="Tyr"

<220>
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<222> (10)..(10)
<223> /note="Residue given in the sequence has no preference
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<400> 25
Asp Ile Asp Pro Asn Asp Gly Ala Thr Asp Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 26
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

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<222> (5)..(5)
<223> /replace="Thr"

<220>
<221> VARIANT
<222> (6)..(6)
<223> /replace="Ser"

<220>
<221> VARIANT
<222> (7)..(7)
<223> /replace="Thr"

<220>
<221> VARIANT
<222> (8)..(8)
<223> /replace="Tyr"

<220>
<221> misc_feature
<222> (5)..(8)
<223> /note="Residues given in the sequence have no preference with respect to the annotations for said positions"

<220>
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<222> (10)..(10)
<223> /replace="Ser"

<220>
<221> misc_feature
<222> (10)..(10)
<223> /note="Residue given in the sequence has no preference with respect to the annotation for said position"

<400> 26
Gly Phe Thr Phe Ser Asn Asn Trp Ile His
1 5 10

<210> 27
<211> 53
<212> PRT
<213> Homo sapiens

<400> 27
Met Glu Lys Lys Leu His Ala Val Pro Ala Ala Lys Thr Val Lys Phe
1 5 10 15

Lys Cys Pro Ser Ser Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys
20 25 30

Asn Gly Lys Glu Phe Lys Pro Asp His Arg Ile Gly Gly Tyr Lys Val
35 40 45

Arg Tyr Ala Thr Trp
50

<210> 28
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 28
Lys Leu His Ala Val Pro Ala Ala Lys Thr Val Lys Phe Lys Cys Pro
1 5 10 15

<210> 29
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 29
Phe Lys Pro Asp His Arg Ile Gly Gly Tyr Lys Val Arg Tyr
1 5 10

<210> 30
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 30
Arg Leu His Ala Val Pro Ala Ala Asn Thr Val Lys Phe Arg Cys Pro
1 5 10 15

<210> 31
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 31
Lys Leu Leu Ala Val Pro Ala Ala Asn Thr Val Arg Phe Arg Cys Pro
1 5 10 15

<210> 32
<211> 16
<212> PRT
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<220>

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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 32
Lys Leu His Ala Val Pro Ala Gly Asn Thr Val Lys Phe Arg Cys Pro
1 5 10 15

<210> 33
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
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<400> 33
Phe Lys Gln Glu His Arg Ile Gly Gly Tyr Lys Val Arg Asn
1 5 10

<210> 34
<211> 14
<212> PRT
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<400> 34
Phe Arg Gly Glu His Arg Ile Gly Gly Ile Lys Leu Arg His
1 5 10

<210> 35
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 35
Phe His Gly Glu Asn Arg Ile Gly Gly Ile Arg Leu Arg His
1 5 10

<210> 36
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 36
Ser Ser Ser Glu Glu Lys Glu Thr Asp Asn Thr Lys Pro Asn Pro Val
1 5 10 15

Ala Pro Tyr

<210> 37
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 37
Pro Val Ala Pro Tyr Trp Thr Ser Pro Glu Lys Met Glu Lys Lys Leu
1 5 10 15

His Ala Val

<210> 38
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 38
Lys Leu His Ala Val Pro Ala Ala Lys Thr Val Lys Phe Lys Cys Pro
1 5 10 15

Ser Ser Gly

<210> 39
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 39
Cys Pro Ser Ser Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys Asn
1 5 10 15

Gly Lys Glu

<210> 40
<211> 19
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 40
Lys Asn Gly Lys Glu Phe Lys Pro Asp His Arg Ile Gly Gly Tyr Lys
1 5 10 15

Val Arg Tyr

<210> 41
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 41
Tyr Lys Val Arg Tyr Ala Thr Trp Ser Ile Ile Met Asp Ser Val Val
1 5 10 15

Pro Ser Asp

<210> 42
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 42
Val Val Pro Ser Asp Lys Gly Asn Tyr Thr Cys Ile Val Glu Asn Glu
1 5 10 15

Tyr Gly Ser

<210> 43
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 43
Asn Glu Tyr Gly Ser Ile Asn His Thr Tyr Gln Leu Asp Val Val Glu
1 5 10 15

Arg Ser Pro

<210> 44
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 44
Val Glu Arg Ser Pro His Arg Pro Ile Leu Gln Ala Gly Leu Pro Ala
1 5 10 15

Asn Lys Thr

<210> 45
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 45
Pro Ala Asn Lys Thr Val Ala Leu Gly Ser Asn Val Glu Phe Met Cys
1 5 10 15

Lys Val Tyr

<210> 46
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 46
Met Cys Lys Val Tyr Ser Asp Pro Gln Pro His Ile Gln Trp Leu Lys
1 5 10 15

His Ile Glu

<210> 47
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 47
Leu Lys His Ile Glu Val Asn Gly Ser Lys Ile Gly Pro Asp Asn Leu
1 5 10 15

Pro Tyr Val

<210> 48
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 48
Asn Leu Pro Tyr Val Gln Ile Leu Lys Thr Ala Gly Val Asn Thr Thr
1 5 10 15

Asp Lys Glu

<210> 49
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 49
Thr Thr Asp Lys Glu Met Glu Val Leu His Leu Arg Asn Val Ser Phe
1 5 10 15

Glu Asp Ala

<210> 50
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 50
Ser Phe Glu Asp Ala Gly Glu Tyr Thr Cys Leu Ala Gly Asn Ser Ile
1 5 10 15

Gly Leu Ser

<210> 51

<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 51
Ser Ile Gly Leu Ser His His Ser Ala Trp Leu Thr Val Leu Glu Ala
1 5 10 15

Leu Glu Glu

<210> 52
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 52
Tyr Trp Thr Ser Pro Glu Lys Met Glu Lys Lys Leu His Ala Val Pro
1 5 10 15

Ala Ala Lys

<210> 53
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 53
Glu Lys Met Glu Lys Lys Leu His Ala Val Pro Ala Ala Lys Thr Val
1 5 10 15

Lys Phe Lys

<210> 54
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 54
Pro Ala Ala Lys Thr Val Lys Phe Lys Cys Pro Ser Ser Gly Thr Pro

1 5 10 15

Asn Pro Thr

<210> 55
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 55
Lys Phe Lys Cys Pro Ser Ser Gly Thr Pro Asn Pro Thr Leu Arg Trp
1 5 10 15

Leu Lys Asn

<210> 56
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 56
Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys Asn Gly Lys Glu Phe
1 5 10 15

Lys Pro Asp

<210> 57
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 57
Thr Leu Arg Trp Leu Lys Asn Gly Lys Glu Phe Lys Pro Asp His Arg
1 5 10 15

Ile Gly Gly

<210> 58
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 58
Phe Lys Pro Asp His Arg Ile Gly Gly Tyr Lys Val Arg Tyr Ala Thr
1 5 10 15

Trp Ser Ile

<210> 59
<211> 19
<212> PRT
<213> Artificial Sequence

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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 59
His Arg Ile Gly Gly Tyr Lys Val Arg Tyr Ala Thr Trp Ser Ile Ile
1 5 10 15

Met Asp Ser

<210> 60
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 60
Leu His Ala Val Pro Ala Ala Lys Thr Val Lys Phe Lys Cys Pro Ser
1 5 10 15

Ser

<210> 61
<211> 16
<212> PRT
<213> Artificial Sequence

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<400> 62
Lys Pro Asp His Arg Ile Gly Gly Tyr Lys Val Arg
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<400> 63
Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys Asn
1 5 10