<110> TEL HASHOMER MEDICAL RESEARCH, INFRASTRUCTURE AND SERVICES LTD.

<120> PEPTIDES AND COMPOSITIONS FOR PREVENTION OF CELL ADHESION AND METHODS OF USING SAME

<130> 095432-0123

<140> SG 201101836-3
<141> 2009-09-23

<150> PCT/IB2009/006926
<151> 2009-09-23

<150> 61/136,673
<151> 2008-09-24

<160> 62

<170> PatentIn version 3.5

<210> 1
<211> 6
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Aquatic organism or moss sequence

<400> 1
Tyr Asp Tyr Asn Trp Tyr
1 5

<210> 2
<211> 6
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Aquatic organism or moss sequence

<400> 2
Tyr Asp Tyr Asn Leu Tyr
1 5

<210> 3
<211> 6
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Aquatic organism or moss sequence

<400> 3
Phe Asp Tyr Asn Phe Tyr
1 5

<210> 4
<211> 6
<212> PRT

<213> Unknown

<220>
<223> Description of Unknown: Aquatic organism or moss sequence

<400> 4
Phe Asp Tyr Asn Leu Tyr
1 5

<210> 5
<211> 6
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Aquatic organism or moss sequence

<400> 5
Phe Asp Tyr Asn Trp Tyr
1 5

<210> 6
<211> 6
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Aquatic organism or moss sequence

<400> 6
Tyr Asp Trp Asn Leu Tyr
1 5

<210> 7
<211> 6
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Aquatic organism or moss sequence

<400> 7
Tyr Asp Trp His Leu Tyr
1 5

<210> 8
<211> 6
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Aquatic organism or moss sequence

<400> 8
Trp Asp Tyr Asn Leu Tyr
1 5

<210> 9

<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide
sequence

<400> 9
Leu Phe Ser Val Pro Tyr Asp Tyr Asn Trp Tyr Ser Asn Trp Trp
1 5 10 15

<210> 10
<211> 14
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide
sequence

<400> 10
Phe Ser Val Pro Tyr Asp Tyr Asn Leu Tyr Ser Asn Trp Trp
1 5 10

<210> 11
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide
sequence

<400> 11
Met Phe Ser Val Pro Phe Asp Tyr Asn Phe Tyr Ser Asn Trp Trp
1 5 10 15

<210> 12
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide
sequence

<400> 12
Met Phe Ser Val Pro Phe Asp Tyr Asn Leu Tyr Ser Asn Trp Trp
1 5 10 15

<210> 13
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide
sequence

<400> 13
Met Phe Ser Val Pro Phe Asp Tyr Asn Leu Tyr Thr Asn Trp Trp
1 5 10 15

<210> 14
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide
sequence

<400> 14
Met Trp Ser Val Pro Phe Asp Tyr Asn Leu Tyr Ser Asn Trp Trp
1 5 10 15

<210> 15
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide
sequence

<400> 15
Met Phe Ser Val Pro Trp Asp Tyr Asn Leu Tyr Lys Asn Trp Phe
1 5 10 15

<210> 16
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide
sequence

<400> 16
Met Phe Ser Val Pro Phe Asp Tyr Asn Leu Tyr Lys Asn Trp Leu
1 5 10 15

<210> 17
<211> 16
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide
sequence

<400> 17
Met Phe Ser Val Pro Phe Phe Asp Tyr Asn Trp Tyr Ser Asn Trp Trp
1 5 10 15

<210> 18
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide
sequence

<400> 18
Leu Phe Ser Val Pro Phe Asp Tyr Asn Leu Tyr Ser Asn Trp Trp

1 5 10 15

<210> 19
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide sequence

<400> 19
Met Ala Ser Ile Pro Tyr Asp Trp Asn Leu Tyr Gln Ser Trp Ala
1 5 10 15

<210> 20
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide sequence

<400> 20
Met Ala Ser Ile Pro Tyr Asp Trp Asn Leu Tyr Ser Ala Trp Ala
1 5 10 15

<210> 21
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide sequence

<400> 21
Met Ala Ser Ile Pro Tyr Asp Trp His Leu Tyr Asn Ala Trp Ala
1 5 10 15

<210> 22
<211> 19
<212> DNA
<213> Aiptesia pulchella

<400> 22
gtrtcgacaa cgagtcrgg 19

<210> 23
<211> 20
<212> DNA
<213> Anemonia viridansm

<400> 23
tgacatycca ccagttgctg 20

<210> 24
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: EqT-IV sequence

<400> 24
Leu Phe Ser Val Pro Tyr Asp Tyr Asn Trp Tyr Ser Asn Trp Trp
1 5 10 15

<210> 25
<211> 14
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Actinoporin Or-A sequence

<400> 25
Phe Ser Val Pro Tyr Asp Tyr Asn Leu Tyr Ser Asn Trp Trp
1 5 10

<210> 26
<211> 15
<212> PRT
<213> Heteractis magnifica

<400> 26
Met Phe Ser Val Pro Phe Asp Tyr Asn Phe Tyr Ser Asn Trp Trp
1 5 10 15

<210> 27
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Avt-I RTX-A sequence

<400> 27
Met Phe Ser Val Pro Phe Asp Tyr Asn Leu Tyr Ser Asn Trp Trp
1 5 10 15

<210> 28
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Pstx20 sequence

<400> 28
Met Phe Ser Val Pro Phe Asp Tyr Asn Leu Tyr Thr Asn Trp Trp
1 5 10 15

<210> 29
<211> 15
<212> PRT
<213> Physcomitrella patens

<400> 29
Met Trp Ser Val Pro Phe Asp Tyr Asn Leu Tyr Ser Asn Trp Trp
1 5 10 15

<210> 30

<211> 15
<212> PRT
<213> Danio rerio

<400> 30
Met Phe Ser Val Pro Trp Asp Tyr Asn Leu Tyr Lys Asn Trp Phe
1 5 10 15

<210> 31
<211> 15
<212> PRT
<213> Tetraodon nigroviridis

<400> 31
Met Phe Ser Val Pro Phe Asp Tyr Asn Leu Tyr Lys Asn Trp Leu
1 5 10 15

<210> 32
<211> 17
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide sequence

<400> 32
Cys Met Phe Ser Val Pro Phe Asp Tyr Asn Trp Tyr Ser Asn Trp Trp
1 5 10 15

Cys

<210> 33
<211> 214
<212> PRT
<213> Actinia equina

<400> 33
Met Ser Arg Leu Ile Ile Val Phe Ile Val Val Thr Met Ile Cys Ser
1 5 10 15

Ala Thr Ala Leu Pro Ser Lys Lys Ile Ile Asp Glu Asp Glu Glu Asp
20 25 30

Glu Lys Arg Ser Ala Asp Val Ala Gly Ala Val Ile Asp Gly Ala Ser
35 40 45

Leu Ser Phe Asp Ile Leu Lys Thr Val Leu Glu Ala Leu Gly Asn Val
50 55 60

Lys Arg Lys Ile Ala Val Gly Val Asp Asn Glu Ser Gly Lys Thr Trp
65 70 75 80

Thr Ala Leu Asn Thr Tyr Phe Arg Ser Gly Thr Ser Asp Ile Val Leu
85 90 95

Pro His Lys Val Pro His Gly Lys Ala Leu Leu Tyr Asn Gly Gln Lys

100 105 110

Asp Arg Gly Pro Val Ala Thr Gly Ala Val Gly Val Leu Ala Tyr Leu
115 120 125

Met Ser Asp Gly Asn Thr Leu Ala Val Leu Phe Ser Val Pro Tyr Asp
130 135 140

Tyr Asn Trp Tyr Ser Asn Trp Trp Asn Val Arg Ile Tyr Lys Gly Lys
145 150 155 160

Arg Arg Ala Asp Gln Arg Met Tyr Glu Glu Leu Tyr Tyr Asn Leu Ser
165 170 175

Pro Phe Arg Gly Asp Asn Gly Trp His Thr Arg Asn Leu Gly Tyr Gly
180 185 190

Leu Lys Ser Arg Gly Phe Met Asn Ser Ser Gly His Ala Ile Leu Glu
195 200 205

Ile His Val Ser Lys Ala
210

<210> 34
<211> 175
<212> PRT
<213> Stichodactyla helianthus

<400> 34
Ala Leu Ala Gly Thr Ile Ile Ala Gly Ala Ser Leu Thr Phe Gln Val
1 5 10 15

Leu Asp Lys Val Leu Glu Glu Leu Gly Lys Val Ser Arg Lys Ile Ala
20 25 30

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

Tyr Phe Arg Ser Gly Thr Thr Asp Val Ile Leu Pro Glu Phe Val Pro
50 55 60

Asn Thr Lys Ala Leu Leu Tyr Ser Gly Arg Lys Asp Thr Gly Pro Val
65 70 75 80

Ala Thr Gly Ala Val Ala Ala Phe Ala Tyr Tyr Met Ser Ser Gly Asn
85 90 95

Thr Leu Gly Val Met Phe Ser Val Pro Phe Asp Tyr Asn Trp Tyr Ser
100 105 110

Asn Trp Trp Asp Val Lys Ile Tyr Ser Gly Lys Arg Arg Ala Asp Gln
115 120 125

Gly Met Tyr Glu Asp Leu Tyr Tyr Gly Asn Pro Tyr Arg Gly Asp Asn
130 135 140

Gly Trp His Glu Lys Asn Leu Gly Tyr Gly Leu Arg Met Lys Gly Ile
145 150 155 160

Met Thr Ser Ala Gly Glu Ala Lys Met Gln Ile Lys Ile Ser Arg
165 170 175

<210> 35
<211> 176
<212> PRT
<213> Actinia equina

<400> 35
Asp Val Ala Gly Ala Val Ile Asp Gly Ala Ser Leu Ser Phe Asp Ile
1 5 10 15

Leu Lys Thr Val Leu Glu Ala Leu Gly Asn Val Lys Arg Lys Ile Ala
20 25 30

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

Tyr Phe Arg Ser Gly Thr Ser Asp Ile Val Leu Pro His Lys Val Pro
50 55 60

His Gly Lys Ala Leu Leu Tyr Asn Gly Gln Lys Asp Arg Gly Pro Val
65 70 75 80

Ala Thr Gly Ala Val Gly Val Leu Ala Tyr Leu Met Ser Asp Gly Asn
85 90 95

Thr Leu Ala Val Leu Phe Ser Val Pro Tyr Asp Tyr Asn Trp Tyr Ser
100 105 110

Asn Trp Trp Asn Val Arg Ile Tyr Lys Gly Lys Arg Arg Ala Asp Gln
115 120 125

Arg Met Tyr Glu Glu Leu Tyr Tyr Asn Leu Ser Pro Phe Arg Gly Asp
130 135 140

Asn Gly Trp His Thr Arg Asn Leu Gly Tyr Gly Leu Lys Ser Arg Gly
145 150 155 160

Phe Met Asn Ser Ser Gly His Ala Ile Leu Glu Ile His Val Ser Lys
165 170 175

<210> 36
<211> 114
<212> PRT
<213> Danio rerio

<400> 36
Met Thr Glu Ser Ala Glu Ala Val Ala Ala Asn Val Ser Ser Arg Arg
1 5 10 15

His Ala Thr Val Glu Ile Thr Asn Leu Thr Asn Asn Tyr Cys Phe Leu
20 25 30

Asn Pro Lys Val Tyr Leu Glu Asn Gly Glu Thr Ser Asn Pro Pro Gln
35 40 45

Pro Thr Val Arg Pro Leu Lys Thr Glu Val Cys Thr Phe Ser Lys Ser
50 55 60

Ala Ala His Ala Thr Gly Ala Asn Gly Ser Gly Ile Asn Phe Glu Gly
65 70 75 80

Lys Asn Leu Asp Ile Arg Ala Thr Met Cys Pro Met Gly Arg Ala Ile
85 90 95

Val Lys Val Glu Val Trp Asp Lys Leu Leu Ser Pro Met Ala Gln Met
100 105 110

Asp Cys

<210> 37
<211> 156
<212> PRT
<213> Actinia equina

<400> 37
Leu Glu Ala Leu Gly Asn Val Lys Arg Lys Ile Ala Val Gly Val Asp
1 5 10 15

Asn Glu Ser Gly Lys Thr Trp Thr Ala Leu Asn Thr Tyr Phe Arg Ser
20 25 30

Gly Thr Ser Asp Ile Val Leu Pro His Lys Val Pro His Gly Lys Ala
35 40 45

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

Val Gly Val Leu Ala Tyr Leu Met Ser Asp Gly Asn Thr Leu Ala Val
65 70 75 80

Leu Phe Ser Val Pro Tyr Asp Tyr Asn Trp Tyr Ser Asn Trp Trp Asn
85 90 95

Val Arg Ile Tyr Lys Gly Lys Arg Arg Ala Asp Gln Arg Met Tyr Glu
100 105 110

Glu Leu Tyr Tyr Asn Leu Ser Pro Phe Arg Gly Asp Asn Gly Trp His

115 120 125

Thr Arg Asn Leu Gly Tyr Gly Leu Lys Ser Arg Gly Phe Met Asn Ser
130 135 140

Ser Gly His Ala Ile Leu Glu Ile His Val Ser Lys
145 150 155

<210> 38
<211> 166
<212> PRT
<213> Danio rerio

<400> 38
Val Ala Ala Asn Val Ser Ser Arg Arg His Ala Thr Val Glu Ile Thr
1 5 10 15

Asn Leu Thr Asn Asn Tyr Cys Phe Leu Asn Pro Lys Val Tyr Leu Glu
20 25 30

Asn Gly Glu Thr Ser Asn Pro Pro Gln Pro Thr Val Arg Pro Leu Lys
35 40 45

Thr Glu Val Cys Thr Phe Ser Lys Ser Ala Ala His Ala Thr Gly Ser
50 55 60

Val Gly Val Leu Thr Tyr Asp Leu Phe Glu Arg Arg Arg Asn Asp Tyr
65 70 75 80

Thr Glu Thr Leu Ala Ile Met Phe Ser Val Pro Trp Asp Tyr Asn Leu
85 90 95

Tyr Lys Asn Trp Phe Ala Val Gly Ile Tyr Pro Lys Gly Lys Glu Cys
100 105 110

Asp Gln Ala Leu Tyr Lys Glu Met Tyr Tyr Gln Lys Asn Gln His Gly
115 120 125

Phe Val Arg Glu Glu Ala Asn Gly Ser Gly Ile Asn Phe Glu Gly Lys
130 135 140

Asn Leu Asp Ile Arg Ala Thr Met Cys Pro Met Gly Arg Ala Ile Val
145 150 155 160

Lys Val Glu Val Trp Asp
165

<210> 39
<211> 181
<212> PRT
<213> Tetraodon nigroviridis

<400> 39
Met Glu Ser Ala Glu Ala Val Ala Ala Asp Val Ser Arg Ser Arg Ser

1 5 10 15

Val Thr Ile Glu Ile Ser Asn Leu Thr Lys Asn Tyr Cys Leu Ile Asn
20 25 30

Pro Arg Val Tyr Leu Glu Ser Gly Glu Thr Tyr Asn Pro Pro Gln Pro
35 40 45

Thr Val Arg Pro Leu Met Thr Glu Val Cys Thr Phe Ser Lys Ser Ser
50 55 60

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

Arg Arg Ser Thr Met Leu Pro Glu Thr Leu Ala Ile Met Phe Ser Val
85 90 95

Pro Tyr Asp Tyr Ser Phe Tyr Asn Asn Trp Phe Ala Val Gly Ile Tyr
100 105 110

Glu Thr Gly Thr Lys Cys Asn Glu Gly Leu Tyr Lys Gln Met Tyr Asn
115 120 125

Glu Lys Lys Gln Ala Glu His Gly Phe Val Arg Glu Lys Ala Asn Gly
130 135 140

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

Asn Pro Leu Gly Lys Ala Ile Met Lys Val Glu Val Trp Asp Ala Phe
165 170 175

Phe Pro Phe Ser Glu
180

<210> 40
<211> 157
<212> PRT
<213> Actinia equina

<400> 40
Leu Glu Ala Leu Gly Asn Val Lys Arg Lys Ile Ala Val Gly Val Asp
1 5 10 15

Asn Glu Ser Gly Lys Thr Trp Thr Ala Leu Asn Thr Tyr Phe Arg Ser
20 25 30

Gly Thr Ser Asp Ile Val Leu Pro His Lys Val Pro His Gly Lys Ala
35 40 45

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

Val Gly Val Leu Ala Tyr Leu Met Ser Asp Gly Asn Thr Leu Ala Val
65 70 75 80

Leu Phe Ser Val Pro Tyr Asp Tyr Asn Trp Tyr Ser Asn Trp Trp Asn
85 90 95

Val Arg Ile Tyr Lys Gly Lys Arg Arg Ala Asp Gln Arg Met Tyr Glu
100 105 110

Glu Leu Tyr Tyr Asn Leu Ser Pro Phe Arg Gly Asp Asn Gly Trp His
115 120 125

Thr Arg Asn Leu Gly Tyr Gly Leu Lys Ser Arg Gly Phe Met Asn Ser
130 135 140

Ser Gly His Ala Ile Leu Glu Ile His Val Ser Lys Ala
145 150 155

<210> 41
<211> 169
<212> PRT
<213> Tetraodon nigroviridis

<400> 41
Val Ala Ala Asp Val Ser Arg Ser Arg Ser Val Thr Ile Glu Ile Ser
1 5 10 15

Asn Leu Thr Lys Asn Tyr Cys Leu Ile Asn Pro Arg Val Tyr Leu Glu
20 25 30

Ser Gly Glu Thr Tyr Asn Pro Pro Gln Pro Thr Val Arg Pro Leu Met
35 40 45

Thr Glu Val Cys Thr Phe Ser Lys Ser Ser Gly Ile Pro Thr Gly Ser
50 55 60

Val Gly Val Leu Thr Tyr Glu Leu Leu Glu Arg Arg Ser Thr Met Leu
65 70 75 80

Pro Glu Thr Leu Ala Ile Met Phe Ser Val Pro Tyr Asp Tyr Ser Phe
85 90 95

Tyr Asn Asn Trp Phe Ala Val Gly Ile Tyr Glu Thr Gly Thr Lys Cys
100 105 110

Asn Glu Gly Leu Tyr Lys Gln Met Tyr Asn Glu Lys Lys Gln Ala Glu
115 120 125

His Gly Phe Val Arg Glu Lys Ala Asn Gly Ser Gly Ile Asn Tyr Val
130 135 140

Gly Gly Asn Leu Asp Ile Arg Ala Thr Met Asn Pro Leu Gly Lys Ala

145 150 155 160

Ile Met Lys Val Glu Val Trp Asp Ala
165

<210> 42
<211> 199
<212> PRT
<213> Physcomitrella patens

<400> 42
Met Val Val His Leu Ile Ala Met Gly Leu Arg Tyr Ser Glu Thr Ile
1 5 10 15

Met Lys Thr Ala Arg Met Ala Glu Ala Ile Ile Pro Ala Ala Glu Leu
20 25 30

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

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

Asn Leu Gly Val Tyr Phe Asn Ser Gly Ser Ser Asp Arg Ser Ile Ala
65 70 75 80

Tyr Lys Ile Asn Ala Gln Glu Ala Leu Leu Phe Ser Ala Arg Lys Ser
85 90 95

Asp His Thr Ala Arg Gly Thr Val Gly Thr Phe Ser Tyr Tyr Ile Gln
100 105 110

Asp Glu Asp Lys Thr Val His Val Met Trp Ser Val Pro Phe Asp Tyr
115 120 125

Asn Leu Tyr Ser Asn Trp Trp Asn Ile Ala Val Val Asp Gly Arg Gln
130 135 140

Pro Pro Asp Ser Asn Val His Asp Asn Leu Tyr Asn Gly Ser Gly Gly
145 150 155 160

Met Pro Tyr Pro Asn Lys Pro Asp Gln Tyr Ile Asn Asn Glu Gln Lys
165 170 175

Gly Phe His Leu Phe Gly Ser Met Thr Asn Asn Gly Gln Ala Thr Ile
180 185 190

Glu Val Glu Leu Lys Lys Ala
195

<210> 43
<211> 180
<212> PRT

<213> Actinia equina

<400> 43
Arg Ser Ala Asp Val Ala Gly Ala Val Ile Asp Gly Ala Ser Leu Ser
1 5 10 15

Phe Asp Ile Leu Lys Thr Val Leu Glu Ala Leu Gly Asn Val Lys Arg
20 25 30

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

Leu Asn Thr Tyr Phe Arg Ser Gly Thr Ser Asp Ile Val Leu Pro His
50 55 60

Lys Val Pro His Gly Lys Ala Leu Leu Tyr Asn Gly Gln Lys Asp Arg
65 70 75 80

Gly Pro Val Ala Thr Gly Ala Val Gly Val Leu Ala Tyr Leu Met Ser
85 90 95

Asp Gly Asn Thr Leu Ala Val Leu Phe Ser Val Pro Tyr Asp Tyr Asn
100 105 110

Trp Tyr Ser Asn Trp Trp Asn Val Arg Ile Tyr Lys Gly Lys Arg Arg
115 120 125

Ala Asp Gln Arg Met Tyr Glu Glu Leu Tyr Tyr Asn Leu Ser Pro Phe
130 135 140

Arg Gly Asp Asn Gly Trp His Thr Arg Asn Leu Gly Tyr Gly Leu Lys
145 150 155 160

Ser Arg Gly Phe Met Asn Ser Ser Gly His Ala Ile Leu Glu Ile His
165 170 175

Val Ser Lys Ala
180

<210> 44
<211> 182
<212> PRT
<213> Physcomitrella patens

<400> 44
Lys Thr Ala Arg Met Ala Glu Ala Ile Ile Pro Ala Ala Glu Leu Ser
1 5 10 15

Ile Lys Thr Leu Gln Asn Ile Val Glu Gly Ile Thr Gly Val Asp Arg
20 25 30

Lys Ile Ala Ile Gly Phe Lys Asn Leu Thr Asp Tyr Thr Leu Glu Asn
35 40 45

Leu Gly Val Tyr Phe Asn Ser Gly Ser Ser Asp Arg Ser Ile Ala Tyr
50 55 60

Lys Ile Asn Ala Gln Glu Ala Leu Leu Phe Ser Ala Arg Lys Ser Asp
65 70 75 80

His Thr Ala Arg Gly Thr Val Gly Thr Phe Ser Tyr Tyr Ile Gln Asp
85 90 95

Glu Asp Lys Thr Val His Val Met Trp Ser Val Pro Phe Asp Tyr Asn
100 105 110

Leu Tyr Ser Asn Trp Trp Asn Ile Ala Val Val Asp Gly Arg Gln Pro
115 120 125

Pro Asp Ser Asn Val His Asp Asn Leu Tyr Asn Gly Ser Gly Gly Met
130 135 140

Pro Tyr Pro Asn Lys Pro Asp Gln Tyr Ile Asn Asn Glu Gln Lys Gly
145 150 155 160

Phe His Leu Phe Gly Ser Met Thr Asn Asn Gly Gln Ala Thr Ile Glu
165 170 175

Val Glu Leu Lys Lys Ala
180

<210> 45
<211> 204
<212> PRT
<213> Gallus gallus

<400> 45
Met Pro Pro Lys Glu Lys Lys Glu Asn Asp Lys Pro Cys Asn Asp Asn
1 5 10 15

Cys Gln Pro Lys Pro Gln Gly Lys Gly Val Glu Ser Leu Met Lys Asn
20 25 30

Ile Asp Val Cys Arg Ser Val Gly Leu Glu Ile Ile Asn Arg Thr Arg
35 40 45

Thr Val Thr Leu Thr Asp Phe Arg Ser Tyr Cys Phe Ser Gly Lys Ile
50 55 60

Val Thr Thr Leu Pro Phe Glu Ile Gly Pro Asp Ser Lys Gly Ile Cys
65 70 75 80

Ile Phe Ala Lys Thr Pro Tyr Ser Leu Arg Gly Ser Val Gly Thr Val
85 90 95

Val Cys Lys Ala Asp Thr Phe Phe Leu Ala Ile Thr Phe Ser Asn Pro

100 105 110

Tyr Asp Tyr Ile Leu Tyr Lys Ile Glu Phe Ala Leu Glu Ile Phe Thr
115 120 125

Glu Pro Asn His Leu Gly Asn Leu Gly Asp Val Phe Ser Lys Met Met
130 135 140

Lys Ser Lys Pro Tyr Cys Gly Ser Ser Leu Phe Gln Arg Ala Val Leu
145 150 155 160

Glu Ser Glu His Glu Thr Leu Glu Val Ser Lys Gly Ser Ile Arg Val
165 170 175

Gln Ala Lys Met Ser Asn Asn Arg Lys Ala Ile Leu Lys Val Gln Val
180 185 190

Glu Asp Met Asp Pro Pro Pro Tyr Ser Lys Gly Met
195 200

<210> 46
<211> 166
<212> PRT
<213> Gallus gallus

<400> 46
Leu Met Lys Asn Ile Asp Val Cys Arg Ser Val Gly Leu Glu Ile Ile
1 5 10 15

Asn Arg Thr Arg Thr Val Thr Leu Thr Asp Phe Arg Ser Tyr Cys Phe
20 25 30

Ser Gly Lys Ile Val Thr Thr Leu Pro Phe Glu Ile Gly Pro Asp Ser
35 40 45

Lys Gly Ile Cys Ile Phe Ala Lys Thr Pro Tyr Ser Leu Arg Gly Ser
50 55 60

Val Gly Thr Val Val Cys Lys Ala Asp Thr Phe Phe Leu Ala Ile Thr
65 70 75 80

Phe Ser Asn Pro Tyr Asp Tyr Ile Leu Tyr Lys Ile Glu Phe Ala Leu
85 90 95

Glu Ile Phe Thr Glu Pro Asn His Leu Gly Asn Leu Gly Asp Val Phe
100 105 110

Ser Lys Met Met Lys Ser Lys Pro Tyr Cys Gly Ser Ser Leu Phe Gln
115 120 125

Arg Ala Val Leu Glu Ser Glu His Glu Thr Leu Glu Val Ser Lys Gly
130 135 140

Ser Ile Arg Val Gln Ala Lys Met Ser Asn Asn Arg Lys Ala Ile Leu
145 150 155 160

Lys Val Gln Val Glu Asp
165

<210> 47
<211> 220
<212> PRT
<213> Ornithorhynchus anatinus

<400> 47
Met Ala Gln Thr Ile Glu His Leu Val His Glu Val Glu Ala Gly Arg
1 5 10 15

Cys Val Gly Ile Glu Ile Thr Asn Thr Thr Asn Met Thr Phe Arg Ser
20 25 30

Pro Arg Thr Phe Cys Phe Ser Gly His Thr Leu Thr Pro Pro Thr Pro
35 40 45

Ile Ile His Pro Asn Asn Ala Gly Phe Cys Ile Phe Val Lys Arg Lys
50 55 60

Phe Ser Leu Arg Gly Ser Val Gly Leu Leu Val Tyr Glu Ile Glu Asp
65 70 75 80

Gln Thr Leu Ala Ile Met Phe Ser Asn Pro Phe Asp Tyr Asn Phe Phe
85 90 95

Lys Val Glu Phe Ala Val Ala Leu Ser Gly Tyr Lys Glu Glu Thr Gln
100 105 110

Asp Leu Lys Ala Phe Phe Glu Leu Leu Tyr His Glu Lys Gln Lys Gly
115 120 125

Trp Leu Lys Met Ala Lys Glu Lys Leu Cys Glu Cys Gln Cys Pro Val
130 135 140

Ser Leu Glu Asn Asn Gly Ile Arg Val Thr Ala Thr Met Ser Asn Asn
145 150 155 160

Ala Lys Ala Ile Ile Lys Leu Ser Ser Pro Asp Ala Lys Pro Pro Glu
165 170 175

Gly Asp Val Ala Asp Val Gln Pro Thr Thr Val Arg Arg Pro Asn Pro
180 185 190

Pro Pro Phe Pro Ser Pro Arg Pro Arg Ile Gly Ser Asp Leu Thr Gly
195 200 205

Asp Gln Leu Ala Thr Leu Asp Phe Glu Ser Gly Lys

210 215 220

<210> 48
<211> 157
<212> PRT
<213> Actinia equina

<400> 48
Leu Glu Ala Leu Gly Asn Val Lys Arg Lys Ile Ala Val Gly Val Asp
1 5 10 15

Asn Glu Ser Gly Lys Thr Trp Thr Ala Leu Asn Thr Tyr Phe Arg Ser
20 25 30

Gly Thr Ser Asp Ile Val Leu Pro His Lys Val Pro His Gly Lys Ala
35 40 45

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

Val Gly Val Leu Ala Tyr Leu Met Ser Asp Gly Asn Thr Leu Ala Val
65 70 75 80

Leu Phe Ser Val Pro Tyr Asp Tyr Asn Trp Tyr Ser Asn Trp Trp Asn
85 90 95

Val Arg Ile Tyr Lys Gly Lys Arg Arg Ala Asp Gln Arg Met Tyr Glu
100 105 110

Glu Leu Tyr Tyr Asn Leu Ser Pro Phe Arg Gly Asp Asn Gly Trp His
115 120 125

Thr Arg Asn Leu Gly Tyr Gly Leu Lys Ser Arg Gly Phe Met Asn Ser
130 135 140

Ser Gly His Ala Ile Leu Glu Ile His Val Ser Lys Ala
145 150 155

<210> 49
<211> 165
<212> PRT
<213> Ornithorhynchus anatinus

<400> 49
Leu Val His Glu Val Glu Ala Gly Arg Cys Val Gly Ile Glu Ile Thr
1 5 10 15

Asn Thr Thr Asn Met Thr Phe Arg Ser Pro Arg Thr Phe Cys Phe Ser
20 25 30

Gly His Thr Leu Thr Pro Pro Thr Pro Ile Ile His Pro Asn Asn Ala
35 40 45

Gly Phe Cys Ile Phe Val Lys Arg Lys Phe Ser Leu Arg Gly Ser Val

50 55 60

Gly Leu Leu Val Tyr Glu Ile Glu Asp Gln Thr Leu Ala Ile Met Phe
65 70 75 80

Ser Asn Pro Phe Asp Tyr Asn Phe Phe Lys Val Glu Phe Ala Val Ala
85 90 95

Leu Ser Gly Tyr Lys Glu Glu Thr Gln Asp Leu Lys Ala Phe Phe Glu
100 105 110

Leu Leu Tyr His Glu Lys Gln Lys Gly Trp Leu Lys Met Ala Lys Glu
115 120 125

Lys Leu Cys Glu Cys Gln Cys Pro Val Ser Leu Glu Asn Asn Gly Ile
130 135 140

Arg Val Thr Ala Thr Met Ser Asn Asn Ala Lys Ala Ile Ile Lys Leu
145 150 155 160

Ser Ser Pro Asp Ala
165

<210> 50
<211> 265
<212> DNA
<213> Aiptasia pulchella

<400> 50
gtgtcgccaa cgagtcggga tgcacttggg aaaagccaaa tacatacttc ttctctggta 60

ctgaggtata aagtgcctcc ctctaaagct tgagaataaa aaagcacttt tgtacggccc 120

acgtaagaca acagggcctg ttgccacggg agctgttgga gtgctcactt acaaaatgtt 180

gtgcaccaat gagacgaaca ctctggctgt tcttttcagt gtacccttcg actacaactt 240

gtacagcaac tggtggaaat gtcaa 265

<210> 51
<211> 14
<212> PRT
<213> Aiptasia pulchella

<400> 51
Phe Ser Val Pro Phe Asp Tyr Asn Leu Tyr Ser Asn Trp Trp
1 5 10

<210> 52
<211> 254
<212> DNA
<213> Anemonia viridans

<220>
<221> modified_base
<222> (37)..(37)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (70)..(70)
<223> a, c, t, g, unknown or other

<400> 52
tgtgtcgaca acgagtcggg caagacgtgg accgcantga acacatactt ccgttctggc 60

acctctgatn tcrtccttcc ccatacagtt ccacatggta aggcactgct ctacaacggt 120

cagaaagatc gtggtccagt tgcgactggc gtggttggag tacttgctta tgccatgagc 180

gatggaaaca ccctggccgt tttgttcagc rttccctatg actataacct gtacagcaac 240

tggtggaatg tcaa 254

<210> 53
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 53
Cys Arg Gln Arg Val Gly Met His Leu Gly Lys Ala Lys Tyr Ile Leu
1 5 10 15

Leu Leu Trp Tyr
20

<210> 54
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> Description of Artificial Sequence: Synthetic peptide

<400> 54
Met Phe Ser Val Pro Phe Asp Tyr Asn Trp Tyr Ser Asn Trp Trp
1 5 10 15

<210> 55
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 55
Cys Phe Ser Val Pro Phe Asp Tyr Asn Trp Tyr Ser Asn Trp Trp Cys
1 5 10 15

<210> 56
<211> 8
<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 56
Cys Phe Asp Tyr Asn Trp Tyr Cys
1 5

<210> 57
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide sequence

<400> 57
Leu Phe Ser Val Pro Tyr Asp Tyr Asn Leu Tyr Ser Asn Trp Trp
1 5 10 15

<210> 58
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide sequence

<400> 58
Met Phe Ser Val Pro Tyr Asp Tyr Asn Leu Tyr Ser Asn Trp Val
1 5 10 15

<210> 59
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide sequence

<400> 59
Leu Phe Ser Val Pro Phe Asp Tyr Asn Phe Tyr Ser Asn Trp Trp
1 5 10 15

<210> 60
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide sequence

<400> 60
Leu Phe Ser Ile Pro Phe Asp Tyr Asn Leu Tyr Ser Asn Trp Trp
1 5 10 15

<210> 61
<211> 15
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown: Peptide sequence

<400> 61
Met Phe Ser Val Pro Phe Asp Tyr Asn Leu Tyr Lys Asn Trp Phe
1 5 10 15

<210> 62
<211> 67
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 62
Gly Ile Lys Cys Leu Pro Leu Lys Leu Glu Asn Lys Lys Ala Leu Leu
1 5 10 15

Tyr Gly Pro Arg Lys Thr Thr Gly Pro Val Ala Thr Gly Ala Val Gly
20 25 30

Val Leu Thr Tyr Lys Met Leu Cys Thr Asn Glu Thr Asn Thr Leu Ala
35 40 45

Val Leu Phe Ser Val Pro Phe Asp Tyr Asn Leu Tyr Ser Asn Trp Trp
50 55 60

Lys Cys Gln
65