

SEQUENCE LISTING

<110> GENOMIX CO., LTD.
OSAKA UNIVERSITY

<120> Tissue-regeneration promoter using recruitment of bone marrow mesenchymal stem cells and/or pluripotent stem cells in blood

<130> G6-A0901P

<150> JP 2009-247143

<151> 2009-10-28

<160> 32

<170> PatentIn version 3.4

<210> 1

<211> 215

<212> PRT

<213> Homo sapiens

<400> 1

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35           40           45
Trp Lys Thr Met Ser Ala Lys Glu Lys Gly Lys Phe Glu Asp Met Ala
50           55           60
Lys Ala Asp Lys Ala Arg Tyr Glu Arg Glu Met Lys Thr Tyr Ile Pro
65           70           75           80
Pro Lys Gly Glu Thr Lys Lys Lys Phe Lys Asp Pro Asn Ala Pro Lys
85           90           95
Arg Pro Pro Ser Ala Phe Phe Leu Phe Cys Ser Glu Tyr Arg Pro Lys
100          105          110
Ile Lys Gly Glu His Pro Gly Leu Ser Ile Gly Asp Val Ala Lys Lys
115          120          125
Leu Gly Glu Met Trp Asn Asn Thr Ala Ala Asp Asp Lys Gln Pro Tyr
130          135          140
Glu Lys Lys Ala Ala Lys Leu Lys Glu Lys Tyr Glu Lys Asp Ile Ala
145          150          155          160
Ala Tyr Arg Ala Lys Gly Lys Pro Asp Ala Ala Lys Lys Gly Val Val
165          170          175
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 195 200 205
 Glu Glu Asp Asp Asp Asp Glu
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 <213> Mus musculus

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 Lys Ala Asp Lys Ala Arg Tyr Glu Arg Glu Met Lys Thr Tyr Ile Pro
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 <213> Rattus norvegicus

<400> 5

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Trp	Lys	Thr	Met	Ser	Ala	Lys	Glu	Lys	Gly	Lys	Phe	Glu	Asp	Met	Ala	
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Ile	Lys	Gly	Glu	His	Pro	Gly	Leu	Ser	Ile	Gly	Asp	Val	Ala	Lys	Lys	
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145					150					155					160	
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<213> Rattus norvegicus

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 <213> Homo sapiens

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 35 40 45
 Trp Lys Thr Met Ser Ala Lys Glu Lys Ser Lys Phe Glu Asp Met Ala
 50 55 60
 Lys Ser Asp Lys Ala Arg Tyr Asp Arg Glu Met Lys Asn Tyr Val Pro
 65 70 75 80
 Pro Lys Gly Asp Lys Lys Gly Lys Lys Lys Asp Pro Asn Ala Pro Lys
 85 90 95
 Arg Pro Pro Ser Ala Phe Phe Leu Phe Cys Ser Glu His Arg Pro Lys
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 Ile Lys Ser Glu His Pro Gly Leu Ser Ile Gly Asp Thr Ala Lys Lys
 115 120 125
 Leu Gly Glu Met Trp Ser Glu Gln Ser Ala Lys Asp Lys Gln Pro Tyr
 130 135 140
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 145 150 155 160
 Ala Tyr Arg Ala Lys Gly Lys Ser Glu Ala Gly Lys Lys Gly Pro Gly
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 Arg Pro Thr Gly Ser Lys Lys Lys Asn Glu Pro Glu Asp Glu Glu Glu
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 195 200 205
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 <213> Homo sapiens

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<213> Mus musculus

<400> 9

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Asp Ser Ser Val Asn Phe Ala Glu Phe Ser Lys Lys Cys Ser Glu Arg
35          40          45
Trp Lys Thr Met Ser Ala Lys Glu Lys Ser Lys Phe Glu Asp Leu Ala
50          55          60
Lys Ser Asp Lys Ala Arg Tyr Asp Arg Glu Met Lys Asn Tyr Val Pro
65          70          75          80
Pro Lys Gly Asp Lys Lys Gly Lys Lys Lys Asp Pro Asn Ala Pro Lys
85          90          95
Arg Pro Pro Ser Ala Phe Phe Leu Phe Cys Ser Glu Asn Arg Pro Lys
100         105         110
Ile Lys Ile Glu His Pro Gly Leu Ser Ile Gly Asp Thr Ala Lys Lys
115         120         125
Leu Gly Glu Met Trp Ser Glu Gln Ser Ala Lys Asp Lys Gln Pro Tyr
130         135         140
Glu Gln Lys Ala Ala Lys Leu Lys Glu Lys Tyr Glu Lys Asp Ile Ala
145         150         155         160
Ala Tyr Arg Ala Lys Gly Lys Ser Glu Ala Gly Lys Lys Gly Pro Gly
165         170         175
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195         200         205
Glu Glu
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<210> 10
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 <213> Mus musculus

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<210> 11
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 <213> Rattus norvegicus

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 Asp Ser Ser Val Asn Phe Ala Glu Phe Ser Lys Lys Cys Ser Glu Arg
 35 40 45
 Trp Lys Thr Met Ser Ala Lys Glu Lys Ser Lys Phe Glu Asp Leu Ala
 50 55 60
 Lys Ser Asp Lys Ala Arg Tyr Asp Arg Glu Met Lys Asn Tyr Val Pro
 65 70 75 80
 Pro Lys Gly Asp Lys Lys Gly Lys Lys Lys Asp Pro Asn Ala Pro Lys
 85 90 95
 Arg Pro Pro Ser Ala Phe Phe Leu Phe Cys Ser Glu His Arg Pro Lys
 100 105 110
 Ile Lys Ser Glu His Pro Gly Leu Ser Ile Gly Asp Thr Ala Lys Lys
 115 120 125
 Leu Gly Glu Met Trp Ser Glu Gln Ser Ala Lys Asp Lys Gln Pro Tyr
 130 135 140

Glu Gln Lys Ala Ala Lys Leu Lys Glu Lys Tyr Glu Lys Asp Ile Ala
 145 150 155 160
 Ala Tyr Arg Ala Lys Gly Lys Ser Glu Val Gly Lys Lys Gly Pro Gly
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 Glu Glu
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<210> 12
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 cccaaagggtg ataagaaagg aaagaaaaaa gatccaaatg ctccaagag accaccgtct 300
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 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Trp Lys Thr Met Ser Gly Lys Glu Lys Ser Lys Phe Asp Glu Met Ala
 50 55 60

Lys Ala Asp Lys Val Arg Tyr Asp Arg Glu Met Lys Asp Tyr Gly Pro
 65 70 75 80
 Ala Lys Gly Gly Lys Lys Lys Lys Asp Pro Asn Ala Pro Lys Arg Pro
 85 90 95
 Pro Ser Gly Phe Phe Leu Phe Cys Ser Glu Phe Arg Pro Lys Ile Lys
 100 105 110
 Ser Thr Asn Pro Gly Ile Ser Ile Gly Asp Val Ala Lys Lys Leu Gly
 115 120 125
 Glu Met Trp Asn Asn Leu Asn Asp Ser Glu Lys Gln Pro Tyr Ile Thr
 130 135 140
 Lys Ala Ala Lys Leu Lys Glu Lys Tyr Glu Lys Asp Val Ala Asp Tyr
 145 150 155 160
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 tttccaaga agtgcctga gaggtggaag acgatgtcgg gaaagagaa atctaaattt 180
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<210> 15
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 <213> Mus musculus

<400> 15

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 35 40 45
 Trp Lys Thr Met Ser Ser Lys Glu Lys Ser Lys Phe Asp Glu Met Ala
 50 55 60
 Lys Ala Asp Lys Val Arg Tyr Asp Arg Glu Met Lys Asp Tyr Gly Pro
 65 70 75 80
 Ala Lys Gly Gly Lys Lys Lys Lys Asp Pro Asn Ala Pro Lys Arg Pro
 85 90 95
 Pro Ser Gly Phe Phe Leu Phe Cys Ser Glu Phe Arg Pro Lys Ile Lys
 100 105 110
 Ser Thr Asn Pro Gly Ile Ser Ile Gly Asp Val Ala Lys Lys Leu Gly
 115 120 125
 Glu Met Trp Asn Asn Leu Ser Asp Asn Glu Lys Gln Pro Tyr Val Thr
 130 135 140
 Lys Ala Ala Lys Leu Lys Glu Lys Tyr Glu Lys Asp Val Ala Asp Tyr
 145 150 155 160
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<212> DNA

<213> Mus musculus

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 35 40 45
 Ile Asn Ile Glu Asn Leu Phe Arg Glu Leu Asp Ile Asn Ser Asp Asn
 50 55 60
 Ala Ile Asn Phe Glu Glu Phe Leu Ala Met Val Ile Lys Val Gly Val
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 Ala Ser His Lys Asp Ser His Lys Glu
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 <212> DNA
 <213> Mus musculus

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 gagtgtcctc agtttgtgca gaatataaat atogaaaact tgttcagaga attggacatc 180
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<210> 19
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 <213> Rattus norvegicus

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 20 25 30

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Lys Asn Thr Glu Ser Leu Phe Lys Glu Leu Asp Val Asn Ser Asp Asn
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Ala Ala His Lys Asp Ser His Lys Glu
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<210> 20
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 <212> DNA
 <213> Rattus norvegicus

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Asp Leu Lys Lys Leu Leu Glu Thr Glu Cys Pro Gln Tyr Ile Arg Lys
          35          40          45
Lys Gly Ala Asp Val Trp Phe Lys Glu Leu Asp Ile Asn Thr Asp Gly
          50          55          60
Ala Val Asn Phe Gln Glu Phe Leu Ile Leu Val Ile Lys Met Gly Val
  65          70          75          80
Ala Ala His Lys Lys Ser His Glu Glu Ser His Lys Glu
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<210> 22
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<212> DNA

<213> Homo sapiens

<400> 22

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gagtgtcttc agtatatcag gaaaaagggt gcagacgtct ggttcaaaga gttggatata 180
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<210> 23

<211> 113

<212> PRT

<213> Mus musculus

<400> 23

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1           5           10           15
Ile Asp Thr Phe His Gln Tyr Ser Arg Lys Glu Gly His Pro Asp Thr
20          25          30
Leu Ser Lys Lys Glu Phe Arg Gln Met Val Glu Ala Gln Leu Ala Thr
35          40          45
Phe Met Lys Lys Glu Lys Arg Asn Glu Ala Leu Ile Asn Asp Ile Met
50          55          60
Glu Asp Leu Asp Thr Asn Gln Asp Asn Gln Leu Ser Phe Glu Glu Cys
65          70          75          80
Met Met Leu Met Ala Lys Leu Ile Phe Ala Cys His Glu Lys Leu His
85          90          95
Glu Asn Asn Pro Arg Gly His Gly His Ser His Gly Lys Gly Cys Gly
100         105         110
Lys

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<210> 24

<211> 342

<212> DNA

<213> Mus musculus

<400> 24

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catcaatact ctaggaagga aggacaccct gacaccctga gcaagaagga attcagacaa 120
atggttgaag cacagttagc aacctttatg aagaaagaga agagaaatga agccctcata 180
aatgacatca tggaggacct ggacacaaac caggacaatc agctgagctt tgaggagtgt 240

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atgatgctga tggcaaagtt gatctttgcc tgtcatgaga agctgcatga gaacaaccca 300
 cgtgggcatg gccacagtca tggcaaaggc tgtgggaagt aa 342

<210> 25
 <211> 113
 <212> PRT
 <213> Rattus norvegicus

<400> 25
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 1 5 10 15
 Ile Asn Val Phe His Gln Tyr Ser Arg Lys Tyr Gly His Pro Asp Thr
 20 25 30
 Leu Asn Lys Ala Glu Phe Lys Glu Met Val Asn Lys Asp Leu Pro Asn
 35 40 45
 Phe Leu Lys Arg Glu Lys Arg Asn Glu Asn Leu Leu Arg Asp Ile Met
 50 55 60
 Glu Asp Leu Asp Thr Asn Gln Asp Asn Gln Leu Ser Phe Glu Glu Cys
 65 70 75 80
 Met Met Leu Met Gly Lys Leu Ile Phe Ala Cys His Glu Lys Leu His
 85 90 95
 Glu Asn Asn Pro Arg Gly His Asp His Arg His Gly Lys Gly Cys Gly
 100 105 110
 Lys

<210> 26
 <211> 342
 <212> DNA
 <213> Rattus norvegicus

<400> 26
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 atggtgaata aggacttgcc aaattttctg aagagggaga aaagaaatga aaatctocta 180
 agagacatca tggaggacct ggacacaaac caggacaato aactgtcctt tgaggagtgt 240
 atgatgctga tgggaaagtt gatctttgcc tgtcatgaga agctgcatga gaacaaccca 300
 cgtgggcatg accacaggca cggcaaaggc tgtgggaagt aa 342

<210> 27
 <211> 116
 <212> PRT

<213> Homo sapiens

<400> 27

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Met Thr Cys Lys Met Ser Gln Leu Glu Arg Asn Ile Glu Thr Ile Ile
1           5           10           15
Asn Thr Pro His Glu His Gln Tyr Ser Val Lys Leu Gly His Pro Asp
20           25           30
Thr Leu Asn Gln Gly Glu Phe Lys Glu Leu Val Arg Lys Asp Leu Gln
35           40           45
Asn Phe Leu Lys Lys Glu Asn Lys Asn Glu Lys Val Ile Glu His Ile
50           55           60
Met Glu Asp Leu Asp Thr Asn Ala Asp Lys Gln Leu Ser Phe Glu Glu
65           70           75           80
Phe Ile Met Leu Met Ala Arg Leu Thr Trp Ala Ser His Glu Lys Met
85           90           95
His Glu Gly Asp Glu Gly Pro Gly His His His Lys Pro Gly Leu Gly
100          105          110
Glu Gly Thr Pro
115

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<210> 28

<211> 345

<212> DNA

<213> Homo sapiens

<400> 28

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gtgcgaaaag atotgcaaaa ttttctcaag aaggagaata agaattgaaa ggtcatagaa    180
cacatcatgg aggacctgga cacaaatgca gacaagcagc tgagottcga ggagttoatc    240
atgtgatgg cgaggctaac ctgggcctcc cagagaaga tgcacgaggg tgacgagggc    300
cctggccacc accataagcc aggcctcggg gagggcacco cctaa                      345

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<210> 29

<211> 63

<212> DNA

<213> Artificial

<220>

<223> An artificially synthesized nucleotide sequence

<400> 29

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gac

63

<210> 30

<211> 7

<212> PRT

<213> Artificial

<220>

<223> An artificially synthesized peptide sequence

<400> 30

Asp Tyr Lys Asp Asp Asp Lys

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5

<210> 31

<211> 220

<212> PRT

<213> Artificial

<220>

<223> An artificially synthesized peptide sequence

<400> 31

Met Ser Pro Ile Leu Gly Tyr Trp Lys Ile Lys Gly Leu Val Gln Pro

1

5

10

15

Thr Arg Leu Leu Leu Glu Tyr Leu Glu Glu Lys Tyr Glu Glu His Leu

20

25

30

Tyr Glu Arg Asp Glu Gly Asp Lys Trp Arg Asn Lys Lys Phe Glu Leu

35

40

45

Gly Leu Glu Phe Pro Asn Leu Pro Tyr Tyr Ile Asp Gly Asp Val Lys

50

55

60

Leu Thr Gln Ser Met Ala Ile Ile Arg Tyr Ile Ala Asp Lys His Asn

65

70

75

80

Met Leu Gly Gly Cys Pro Lys Glu Arg Ala Glu Ile Ser Met Leu Glu

85

90

95

Gly Ala Val Leu Asp Ile Arg Tyr Gly Val Ser Arg Ile Ala Tyr Ser

100

105

110

Lys Asp Phe Glu Thr Leu Lys Val Asp Phe Leu Ser Lys Leu Pro Glu

115

120

125

Met Leu Lys Met Phe Glu Asp Arg Leu Cys His Lys Thr Tyr Leu Asn

130

135

140

Gly Asp His Val Thr His Pro Asp Phe Met Leu Tyr Asp Ala Leu Asp

145

150

155

160

Val Val Leu Tyr Met Asp Pro Met Cys Leu Asp Ala Phe Pro Lys Leu
 165 170 175
 Val Cys Phe Lys Lys Arg Ile Glu Ala Ile Pro Gln Ile Asp Lys Tyr
 180 185 190
 Leu Lys Ser Ser Lys Tyr Ile Ala Trp Pro Leu Gln Gly Trp Gln Ala
 195 200 205
 Thr Phe Gly Gly Gly Asp His Pro Pro Lys Ser Asp
 210 215 220

<210> 32

<211> 660

<212> DNA

<213> Artificial

<220>

<223> An artificially synthesized nucleotide sequence

<400> 32

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tggcgaaaca aaaagtttga attgggtttg gagtttccca atcttcotta ttatatgat	180
gggatgttta aattaacaca gtctatggcc atcatacgtt atatagctga caagcacaac	240
atgttgggtg gttgtccaaa agagcgtgca gagatttcaa tgcttgaagg agcggttttg	300
gatattagat acggtgtttc gagaattgca tatagttaaag actttgaaac totcaaagtt	360
gattttotta gcaagctacc tgaaatgctg aaaatgttcg aagatcgttt atgtcataaa	420
acataattaa atggtgatca tgtaaccocat cctgacttca tgttgtatga cgtcttgat	480
gttgttttat acatggaccc aatgtgctg gatgcgttcc caaaattagt ttgtttttaa	540
aaacgtattg aagctatccc acaaattgat aagtacttga aatccagcaa gtatatagca	600
tggcctttgc agggctggca agccacgttt ggtggtggcg accatcctcc aaaatcggat	660