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SEQUENCE LISTING

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<120> BISPECIFIC CONSTRUCTS AND THEIR USE IN THE TREATMENT OF VARIOUS DISEASES

<130> 110156P877PC

<150> EP13005113.9

<151> 2013-10-25

<160> 64

<170> PatentIn version 3.5

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Ala Pro Lys Leu Leu Ile Tyr Xaa Gly Val Pro Ser Arg Phe Ser Gly
          35          40          45

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
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Glu Asp Phe Ala Thr Tyr Tyr Cys Xaa Phe Gly Gln Gly Thr Lys Leu
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Thr Val Leu Gly

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Asp Arg Val Thr Ile Thr Cys Xaa Trp Tyr Gln Gln Lys Pro Gly Lys
          20          25          30

Ala Pro Lys Leu Leu Ile Tyr Xaa Gly Val Pro Ser Arg Phe Ser Gly
          35          40          45

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Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
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Glu Asp Phe Ala Thr Tyr Tyr Cys Xaa Phe Gly Gly Gly Thr Lys Leu
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Asp Arg Val Thr Ile Thr Cys Xaa Trp Tyr Gln Gln Lys Pro Gly Lys
20 25 30

Ala Pro Lys Leu Leu Ile Tyr Xaa Gly Val Pro Ser Arg Phe Ser Gly
35 40 45

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
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Thr Val Leu Gly

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20 25 30

Ala Pro Lys Leu Leu Ile Tyr Xaa Gly Val Pro Ser Arg Phe Ser Gly
35 40 45

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
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          20          25          30

Ala Pro Lys Leu Leu Ile Tyr Xaa Gly Val Pro Ser Arg Phe Ser Gly
          35          40          45

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
          50          55          60

Glu Asp Glu Ala Thr Tyr Tyr Cys Xaa Phe Gly Thr Gly Thr Lys Val
65          70          75          80

Thr Val Leu Gly

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          20          25          30

Gly Lys Gly Leu Glu Trp Ile Gly Xaa Arg Phe Thr Ile Ser Arg Asp
          35          40          45

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Asn Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
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Thr Val Ser Ser

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Arg Xaa Asn Tyr Gly Xaa Asp Leu
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 20 25 30

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

Tyr Arg Ala Ser Thr Leu Ala 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 Ser Asn Tyr Gly Ile Asn Tyr
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Tyr Gly Ala Ala Phe Gly Gln Gly Thr Lys Leu Thr Val Leu Gly
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20 25 30

Asp Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Ile Ile Tyr Val Ser Gly Ser Ala Tyr Tyr Ala Ser Trp Ala Lys
50 55 60

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

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
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Arg Ile Asn Tyr Gly Leu Asp Leu Trp Gly Gln Gly Thr Leu Val Thr
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Val Ser Ser
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Arg Arg Xaa Tyr Asn Xaa Xaa Gly Xaa Pro Xaa Xaa Ile Gly Asp Leu
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Gln Ser Ser Xaa Ser Val Tyr Xaa Asn Xaa Arg Leu Ser
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Xaa Xaa Ser Xaa Leu Ala Ser
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<223> artificial CDR library construct "X" are placeholders for amino acid residues with limited diversitys (see Table 4)

<220>

<221> MISC_FEATURE

<222> (14)..(14)

<223> mixture of A and V

<400> 39

Met Ile Leu Arg Ala Gly Asn Ile Tyr Tyr Ala Ser Trp Xaa Lys Gly
1 5 10 15

<210> 40

<211> 16

<212> PRT

<213> Artificial sequence

<220>

<223> artificial CDR library construct "X" are placeholders for amino acid residues with limited diversitys (see Table 4)

<220>

<221> MISC_FEATURE

<222> (3)..(3)

<223> mixture of H and Q

<220>

<221> MISC_FEATURE

<222> (6)..(6)

<223> mixture of T and R

<220>

<221> MISC_FEATURE

<222> (7)..(7)

<223> mixture of D and E

<400> 40

Arg Arg Xaa Tyr Asn Xaa Xaa Gly Tyr Pro Ile Gly Ile Gly Asp Leu
1 5 10 15

<210> 41

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> artificial CDR construct

<400> 41

Gln Ser Ser Glu Ser Val Tyr Asn Asn Lys Arg Leu Ser
1 5 10

<210> 42

<211> 7

<212> PRT

<213> Artificial sequence

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<220>

<223> artificial CDR construct

<400> 42

Thr Ala Ser Ser Leu Ala Ser

1 5

<210> 43

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> artificial CDR construct

<400> 43

Gln Gly Glu Phe Thr Cys Ser Asn Ala Asp Cys Phe Thr

1 5 10

<210> 44

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> artificial CDR construct

<400> 44

Gly Phe Pro Leu Ser Ser Tyr Ala Met Ile

1 5 10

<210> 45

<211> 16

<212> PRT

<213> Artificial sequence

<220>

<223> artificial CDR construct

<400> 45

Met Ile Leu Arg Ala Gly Asn Ile Tyr Tyr Ala Ser Trp Val Lys Gly

1 5 10 15

<210> 46

<211> 16

<212> PRT

<213> Artificial sequence

<220>

<223> artificial CDR construct

<400> 46

Arg Arg His Tyr Asn Arg Glu Gly Tyr Pro Ile Gly Ile Gly Asp Leu

1 5 10 15

<210> 47

<211> 114

<212> PRT

<213> Artificial sequence

<220>

<223> artificial antibody light chain

<400> 47

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 Gln Ser Ser Glu Ser Val Tyr Asn Asn
20 25 30

Lys Arg Leu Ser Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu
35 40 45

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

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

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

Ser Asn Ala Asp Cys Phe Thr Phe Gly Gln Gly Thr Lys Leu Thr Val
100 105 110

Leu Gly

<210> 48

<211> 123

<212> PRT

<213> Artificial sequence

<220>

<223> artificial antibody heavy chain

<400> 48

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 Pro Leu Ser Ser Tyr
20 25 30

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

Gly Met Ile Leu Arg Ala Gly Asn Ile Tyr Tyr Ala Ser Trp Val Lys
50 55 60

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

110156P877PC SEQUENCE LISTING_ST25.txt

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

Arg Arg His Tyr Asn Arg Glu Gly Tyr Pro Ile Gly Ile Gly Asp Leu
100 105 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 49
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> artificial CDR construct

<400> 49

Gln Ser Ser Glu Ser Val Tyr Ser Asn Asn Arg Leu Ser
1 5 10

<210> 50
<211> 7
<212> PRT
<213> Artificial sequence

<220>
<223> artificial CDR construct

<400> 50

Ser Ala Ser Thr Leu Ala Ser
1 5

<210> 51
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> artificial CDR construct

<400> 51

Gln Gly Glu Phe Ser Cys Ser Ser Val Asp Cys Phe Ser
1 5 10

<210> 52
<211> 10
<212> PRT
<213> Artificial sequence

<220>
<223> artificial CDR construct

<400> 52

Gly Phe Pro Leu Ser Ala Tyr Ala Met Ile
1 5 10

110156P877PC SEQUENCE LISTING_ST25.txt

<210> 53
 <211> 16
 <212> PRT
 <213> Artificial sequence

<220>
 <223> artificial CDR construct

<400> 53

Met Ile Ile Arg Ser Gly Thr Val Tyr Tyr Ala Asn Trp Ala Lys Gly
 1 5 10 15

<210> 54
 <211> 16
 <212> PRT
 <213> Artificial sequence

<220>
 <223> artificial CDR construct

<400> 54

Arg Arg His Tyr Asn Ala Asp Gly Tyr Pro Ile Gly Ile Gly Asp Leu
 1 5 10 15

<210> 55
 <211> 114
 <212> PRT
 <213> Artificial sequence

<220>
 <223> artificial antibody light chain

<400> 55

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 Gln Ser Ser Glu Ser Val Tyr Ser Asn
 20 25 30

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

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

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

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

Ser Ser Val Asp Cys Phe Ser Phe Gly Gln Gly Thr Lys Leu Thr Val
 100 105 110

Leu Gly

110156P877PC SEQUENCE LISTING_ST25.txt

<210> 56
 <211> 123
 <212> PRT
 <213> Artificial sequence

<220>
 <223> artificial antibody heavy chain

<400> 56

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 Pro Leu Ser Ala Tyr
 20 25 30

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

Gly Met Ile Ile Arg Ser Gly Thr Val Tyr Tyr Ala Asn Trp Ala Lys
 50 55 60

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

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

Arg Arg His Tyr Asn Ala Asp Gly Tyr Pro Ile Gly Ile Gly Asp Leu
 100 105 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 57
 <211> 13
 <212> PRT
 <213> Artificial sequence

<220>
 <223> artificial CDR construct

<400> 57

Gln Ser Asn Glu Asn Ile Tyr Ser Asn Asn Arg Leu Ser
 1 5 10

<210> 58
 <211> 7
 <212> PRT
 <213> Artificial sequence

<220>
 <223> artificial CDR construct

<400> 58

110156P877PC SEQUENCE LISTING_ST25.txt

Ser Ala Ser Ser Leu Ala Ser
1 5

<210> 59
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> artificial CDR construct

<400> 59

Gln Gly Glu Phe Asn Cys Asn Ser Ala Asp Cys Phe Thr
1 5 10

<210> 60
<211> 10
<212> PRT
<213> Artificial sequence

<220>
<223> artificial CDR construct

<400> 60

Gly Phe Pro Leu Asn Arg Tyr Ala Met Leu
1 5 10

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

<220>
<223> artificial CDR construct

<400> 61

Leu Ile Thr Arg Ala Asp Lys Lys Tyr Tyr Ala Ser Trp Ala Lys Gly
1 5 10 15

<210> 62
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> artificial CDR construct

<400> 62

Arg Arg His Tyr Asn Thr Asp Gly Tyr Pro Ile Ala Ile Gly Asp Leu
1 5 10 15

<210> 63
<211> 114
<212> PRT
<213> Artificial sequence

<220>
<223> artificial antibody light chain

110156P877PC SEQUENCE LISTING_ST25.txt

<400> 63

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

Leu Gly

<210> 64

<211> 123

<212> PRT

<213> Artificial sequence

<220>

<223> artificial antibody heavy chain

<400> 64

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 Val Ser Gly Phe Pro Leu Asn Arg Tyr
 20 25 30
 Ala Met Leu Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
 35 40 45
 Gly Leu Ile Thr Arg Ala Asp Lys Lys Tyr Tyr Ala Ser Trp Ala Lys
 50 55 60
 Gly Arg Phe Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Val Tyr Leu
 65 70 75 80
 Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
 85 90 95

110156P877PC SEQUENCE LISTING_ST25.txt

Arg Arg His Tyr Asn Thr Asp Gly Tyr Pro Ile Ala Ile Gly Asp Leu
100 105 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120