

PhoenixTemp29377.tmp.txt
SEQUENCE LISTING

<110> ITI Scotland Limited

<120> Magnetic Recognition System

<130> 317541.WO/CMH

<150> GB0808089.7

<151> 2008-05-02

<160> 5

<170> PatentIn version 3.1

<210> 1

<211> 590

<212> PRT

<213> Artificial Sequence

<220>

<223> scFv-ferritin fusion protein

<400> 1

Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
1 5 10 15

Phe Thr Phe Ser Ser Phe Ser Met Ser Trp Val Arg Gln Ala Pro Gly
20 25 30

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

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

Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
65 70 75 80

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Thr Ala Val Tyr Tyr Cys Ala Lys Pro Phe Pro Tyr Phe Asp Tyr Trp
 85 90 95
 Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Asp Gly Ser Ser Gly
 100 105 110
 Gly Ser Gly Gly Ala Ser Thr Gly Glu Ile Val Leu Thr Gln Ser Pro
 115 120 125
 Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg
 130 135 140
 Ala Ser Gln Ser Val Ser Ser Ser Phe Leu Ala Trp Tyr Gln Gln Lys
 145 150 155 160
 Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Tyr Ala Ser Ser Arg Ala
 165 170 175
 Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
 180 185 190
 Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr
 195 200 205
 Cys Gln Gln Thr Gly Arg Ile Pro Pro Thr Phe Gly Gln Gly Thr Lys
 210 215 220
 Val Glu Ile Lys Ser Gly Gly Gly Met Thr Thr Ala Ser Thr Ser Gln
 225 230 235 240
 Val Arg Gln Asn Tyr His Gln Asp Ser Glu Ala Ala Ile Asn Arg Gln
 245 250 255
 Ile Asn Leu Glu Leu Tyr Ala Ser Tyr Val Tyr Leu Ser Met Ser Tyr
 260 265 270
 Tyr Phe Asp Arg Asp Asp Val Ala Leu Lys Asn Phe Ala Lys Tyr Phe
 275 280 285
 Leu His Gln Ser His Glu Glu Arg Glu His Ala Glu Lys Leu Met Lys
 290 295 300
 Leu Gln Asn Gln Arg Gly Gly Arg Ile Phe Leu Gln Asp Ile Lys Lys
 305 310 315 320
 Pro Asp Cys Asp Asp Trp Glu Ser Gly Leu Asn Ala Met Glu Cys Ala
 325 330 335
 Leu His Leu Glu Lys Asn Val Asn Gln Ser Leu Leu Glu Leu His Lys
 340 345 350

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Leu Ala Thr Asp Lys Asn Asp Pro His Leu Cys Asp Phe Ile Glu Thr
 355 360 365

His Tyr Leu Asn Glu Gln Val Lys Ala Ile Lys Glu Leu Gly Asp His
 370 375 380

Val Thr Asn Leu Arg Lys Met Gly Ala Pro Glu Ser Gly Leu Ala Glu
 385 390 395 400

Tyr Leu Phe Asp Lys His Thr Leu Gly Asp Ser Asp Asn Glu Ser Met
 405 410 415

Ser Ser Gln Ile Arg Gln Asn Tyr Ser Thr Asp Val Glu Ala Ala Val
 420 425 430

Asn Ser Leu Val Asn Leu Tyr Leu Gln Ala Ser Tyr Thr Tyr Leu Ser
 435 440 445

Leu Gly Phe Tyr Phe Asp Arg Asp Asp Val Ala Leu Glu Gly Val Ser
 450 455 460

His Phe Phe Arg Glu Leu Ala Glu Glu Lys Arg Glu Gly Tyr Glu Arg
 465 470 475 480

Leu Leu Lys Met Gln Asn Gln Arg Gly Gly Arg Ala Leu Phe Gln Asp
 485 490 495

Ile Lys Lys Pro Ala Glu Asp Glu Trp Gly Lys Thr Pro Asp Ala Met
 500 505 510

Lys Ala Ala Met Ala Leu Glu Lys Lys Leu Asn Gln Ala Leu Leu Asp
 515 520 525

Leu His Ala Leu Gly Ser Ala Arg Thr Asp Pro His Leu Cys Asp Phe
 530 535 540

Leu Glu Thr His Phe Leu Asp Glu Glu Val Lys Leu Ile Lys Lys Met
 545 550 555 560

Gly Asp His Leu Thr Asn Leu His Arg Leu Gly Gly Pro Glu Ala Gly
 565 570 575

Leu Gly Glu Tyr Leu Phe Glu Arg Leu Thr Leu Lys His Asp
 580 585 590

<210> 2

<211> 312

<212> PRT

<213> Artificial Sequence

<220>

<223> scFv-MT2 fusion protein

<400> 2

Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
 1 5 10 15

Phe Thr Phe Ser Ser Phe Ser Met Ser Trp Val Arg Gln Ala Pro Gly
 20 25 30

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

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

Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
 65 70 75 80

Thr Ala Val Tyr Tyr Cys Ala Lys Pro Phe Pro Tyr Phe Asp Tyr Trp
 85 90 95

Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Asp Gly Ser Ser Gly
 100 105 110

Gly Ser Gly Gly Ala Ser Thr Gly Glu Ile Val Leu Thr Gln Ser Pro
 115 120 125

Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg
 130 135 140

Ala Ser Gln Ser Val Ser Ser Ser Phe Leu Ala Trp Tyr Gln Gln Lys
 145 150 155 160

Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Tyr Ala Ser Ser Arg Ala
 165 170 175

Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
 180 185 190

Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr
 195 200 205

Cys Gln Gln Thr Gly Arg Ile Pro Pro Thr Phe Gly Gln Gly Thr Lys
 210 215 220

Val Glu Ile Lys Ser Gly Gly Gly Met Asp Pro Asn Cys Ser Cys Ala
 225 230 235 240

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Ala Gly Asp Ser Cys Thr Cys Ala Gly Ser Cys Lys Cys Lys Glu Cys
 245 250 255

Lys Cys Thr Ser Cys Lys Lys Ser Cys Cys Ser Cys Cys Pro Val Gly
 260 265 270

Cys Ala Lys Cys Ala Gln Gly Cys Ile Cys Lys Gly Ala Ser Asp Lys
 275 280 285

Cys Ser Cys Cys Ala Pro Gly Ser Ala Gly Gly Ser Gly Gly Asp Ser
 290 295 300

Met Ala Glu Val Gln Leu Leu Glu
 305 310

<210> 3

<211> 182

<212> PRT

<213> Artificial Sequence

<220>

<223> Ferritin heavy chain

<400> 3

Met Thr Thr Ala Ser Thr Ser Gln Val Arg Gln Asn Tyr His Gln Asp
 1 5 10 15

Ser Glu Ala Ala Ile Asn Arg Gln Ile Asn Leu Glu Leu Tyr Ala Ser
 20 25 30

Tyr Val Tyr Leu Ser Met Ser Tyr Tyr Phe Asp Arg Asp Asp Val Ala
 35 40 45

Leu Lys Asn Phe Ala Lys Tyr Phe Leu His Gln Ser His Glu Glu Arg
 50 55 60

Glu His Ala Lys Leu Met Lys Leu Gln Asn Gln Arg Gly Gly Arg Ile
 65 70 75 80

Phe Leu Gln Asp Ile Lys Lys Pro Asp Cys Asp Asp Trp Glu Ser Gly
 85 90 95

Leu Asn Ala Met Glu Cys Ala Leu His Leu Glu Lys Asn Val Asn Gln
 100 105 110

Ser Leu Leu Glu Leu His Lys Leu Ala Thr Asp Lys Asn Asp Pro His
 115 120 125

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Leu Cys Asp Phe Ile Glu Thr His Tyr Leu Asn Glu Gln Val Lys Ala
 130 135 140

Ile Lys Glu Leu Gly Asp His Val Thr Asn Leu Arg Lys Met Gly Ala
 145 150 155 160

Pro Glu Ser Gly Leu Ala Glu Tyr Leu Phe Asp Lys His Thr Leu Gly
 165 170 175

Asp Ser Asp Asn Glu Ser
 180

<210> 4

<211> 175

<212> PRT

<213> Artificial Sequence

<220>

<223> Ferritin light chain

<400> 4

Met Ser Ser Gln Ile Arg Gln Asn Tyr Ser Thr Asp Val Glu Ala Ala
 1 5 10 15

Val Asn Ser Leu Val Asn Leu Tyr Leu Gln Ala Ser Tyr Thr Tyr Leu
 20 25 30

Ser Leu Gly Phe Tyr Phe Asp Arg Asp Asp Val Ala Leu Glu Gly Val
 35 40 45

Ser His Phe Phe Arg Glu Leu Ala Glu Glu Lys Arg Glu Gly Tyr Glu
 50 55 60

Arg Leu Leu Lys Met Gln Asn Gln Arg Gly Gly Arg Ala Leu Phe Gln
 65 70 75 80

Asp Ile Lys Lys Pro Ala Glu Asp Glu Trp Gly Lys Thr Pro Asp Ala
 85 90 95

Met Lys Ala Ala Met Ala Leu Glu Lys Lys Leu Asn Gln Ala Leu Leu
 100 105 110

Asp Leu His Ala Leu Gly Ser Ala Arg Thr Asp Pro His Leu Cys Asp
 115 120 125

Phe Leu Glu Thr His Phe Leu Asp Glu Glu Val Lys Leu Ile Lys Lys
 130 135 140

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Met Gly Asp His Leu Thr Asn Leu His Arg Leu Gly Gly Pro Glu Ala
145 150 155 160

Gly Leu Gly Glu Tyr Leu Phe Glu Arg Leu Thr Leu Lys His Asp
165 170 175

<210> 5

<211> 80

<212> PRT

<213> Artificial Sequence

<220>

<223> MT2

<400> 5

Met Asp Pro Asn Cys Ser Cys Ala Ala Gly Asp Ser Cys Thr Cys Ala
1 5 10 15

Gly Ser Cys Lys Cys Lys Glu Cys Lys Cys Thr Ser Cys Lys Lys Ser
20 25 30

Cys Cys Ser Cys Cys Pro Val Gly Cys Ala Lys Cys Ala Gln Gly Cys
35 40 45

Ile Cys Lys Gly Ala Ser Asp Lys Cys Ser Cys Cys Ala Pro Gly Ser
50 55 60

Ala Gly Gly Ser Gly Gly Asp Ser Met Ala Glu Val Gln Leu Leu Glu
65 70 75 80