SEQUENCE LISTING

<110> Levicept Ltd.

<120> FUSION PROTEIN

<130> LEV01134GBP1

<160> 15

<170> PatentIn version 3.5

<210> 1
<211> 460
<212> PRT
<213> Artificial Sequence

<220>
<223> Fusion Protein

<400> 1

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Lys Glu Ala Cys Pro Thr Gly Leu Tyr Thr His Ser Gly Glu Cys Cys
1               5                   10                  15


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


Gln Thr Val Cys Glu Pro Cys Leu Asp Ser Val Thr Phe Ser Asp Val
        35                  40                  45


Val Ser Ala Thr Glu Pro Cys Lys Pro Cys Thr Glu Cys Val Gly Leu
    50                  55                  60


Gln Ser Met Ser Ala Pro Cys Val Glu Ala Asp Asp Ala Val Cys Arg
65                  70                  75                  80


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


Cys Arg Val Cys Glu Ala Gly Ser Gly Leu Val Phe Ser Cys Gln Asp
            100                 105                 110
```

```
Lys Gln Asn Thr Val Cys Glu Glu Cys Pro Asp Gly Thr Tyr Ser Asp
        115                 120                 125

Glu Ala Asn His Val Asp Pro Cys Leu Pro Cys Thr Val Cys Glu Asp
    130                 135                 140

Thr Glu Arg Gln Leu Arg Glu Cys Thr Arg Trp Ala Asp Ala Glu Cys
145                 150                 155                 160

Glu Glu Ile Pro Gly Arg Trp Ile Thr Arg Ser Thr Pro Pro Glu Gly
                165                 170                 175

Ser Asp Ser Thr Ala Pro Ser Thr Gln Glu Pro Glu Ala Pro Pro Glu
            180                 185                 190

Gln Asp Leu Ile Ala Ser Thr Val Ala Gly Val Val Thr Thr Val Met
        195                 200                 205

Gly Ser Ser Gln Pro Val Val Thr Arg Gly Thr Thr Asp Asn Asp Ile
    210                 215                 220

Glu Gly Arg Met Asp Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro
225                 230                 235                 240

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
                245                 250                 255

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
            260                 265                 270

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
        275                 280                 285

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
    290                 295                 300
```

```
Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
305                 310                 315                 320

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
                325                 330                 335

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
            340                 345                 350

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
        355                 360                 365

Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
    370                 375                 380

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
385                 390                 395                 400

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
                405                 410                 415

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
            420                 425                 430

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
        435                 440                 445

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
    450                 455                 460
```

<210> 2
<211> 462
<212> PRT
<213> Artificial Sequence

<220>

<223> Fusion Protein

<400> 2

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Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser Val Thr Thr Gly
1               5                  10                  15

Val His Ser Lys Glu Ala Cys Pro Thr Gly Leu Tyr Thr His Ser Gly
            20                  25                  30

Glu Cys Cys Lys Ala Cys Asn Leu Gly Glu Gly Val Ala Gln Pro Cys
        35                  40                  45

Gly Ala Asn Gln Thr Val Cys Glu Pro Cys Leu Asp Ser Val Thr Phe
    50                  55                  60

Ser Asp Val Val Ser Ala Thr Glu Pro Cys Lys Pro Cys Thr Glu Cys
65                  70                  75                  80

Val Gly Leu Gln Ser Met Ser Ala Pro Cys Val Glu Ala Asp Asp Ala
                85                  90                  95

Val Cys Arg Cys Ala Tyr Gly Tyr Tyr Gln Asp Glu Thr Thr Gly Arg
            100                 105                 110

Cys Glu Ala Cys Arg Val Cys Glu Ala Gly Ser Gly Leu Val Phe Ser
        115                 120                 125

Cys Gln Asp Lys Gln Asn Thr Val Cys Glu Glu Cys Pro Asp Gly Thr
    130                 135                 140

Tyr Ser Asp Glu Ala Asn His Val Asp Pro Cys Leu Pro Cys Thr Val
145                 150                 155                 160

Cys Glu Asp Thr Glu Arg Gln Leu Arg Glu Cys Thr Arg Trp Ala Asp
                165                 170                 175
```

```
Ala Glu Cys Glu Glu Ile Pro Gly Arg Trp Ile Thr Arg Ser Thr Pro
            180                 185                 190

Pro Glu Gly Ser Asp Ser Thr Ala Pro Ser Thr Gln Glu Pro Glu Ala
        195                 200                 205

Pro Pro Glu Gln Asp Leu Ile Ala Ser Thr Val Ala Gly Val Val Thr
    210                 215                 220

Thr Val Met Gly Gly Gly Gly Glu Pro Lys Ser Ser Asp Lys Thr His
225                 230                 235                 240

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
                245                 250                 255

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
            260                 265                 270

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
        275                 280                 285

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
    290                 295                 300

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
305                 310                 315                 320

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
                325                 330                 335

Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
            340                 345                 350

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
        355                 360                 365
```

```
Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
    370                 375                 380

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
385                 390                 395                 400

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
                405                 410                 415

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
            420                 425                 430

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
        435                 440                 445

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
    450                 455                 460
```

<210> 3
<211> 443
<212> PRT
<213> Artificial Sequence

<220>
<223> Fusion protein

<400> 3

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Lys Glu Ala Cys Pro Thr Gly Leu Tyr Thr His Ser Gly Glu Cys Cys
1               5                   10                  15

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

Gln Thr Val Cys Glu Pro Cys Leu Asp Ser Val Thr Phe Ser Asp Val
        35                  40                  45

Val Ser Ala Thr Glu Pro Cys Lys Pro Cys Thr Glu Cys Val Gly Leu
    50                  55                  60
```

```
Gln Ser Met Ser Ala Pro Cys Val Glu Ala Asp Asp Ala Val Cys Arg
65                  70                  75                  80

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

Cys Arg Val Cys Glu Ala Gly Ser Gly Leu Val Phe Ser Cys Gln Asp
            100                 105                 110

Lys Gln Asn Thr Val Cys Glu Glu Cys Pro Asp Gly Thr Tyr Ser Asp
        115                 120                 125

Glu Ala Asn His Val Asp Pro Cys Leu Pro Cys Thr Val Cys Glu Asp
    130                 135                 140

Thr Glu Arg Gln Leu Arg Glu Cys Thr Arg Trp Ala Asp Ala Glu Cys
145                 150                 155                 160

Glu Glu Ile Pro Gly Arg Trp Ile Thr Arg Ser Thr Pro Pro Glu Gly
                165                 170                 175

Ser Asp Ser Thr Ala Pro Ser Thr Gln Glu Pro Glu Ala Pro Pro Glu
            180                 185                 190

Gln Asp Leu Ile Ala Ser Thr Val Ala Gly Val Val Thr Thr Val Met
        195                 200                 205

Gly Gly Gly Gly Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro
    210                 215                 220

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
225                 230                 235                 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
                245                 250                 255
```

```
Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
            260                 265                 270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
        275                 280                 285

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
    290                 295                 300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
305                 310                 315                 320

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
                325                 330                 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
            340                 345                 350

Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
        355                 360                 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
    370                 375                 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
385                 390                 395                 400

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
                405                 410                 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
            420                 425                 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
        435                 440
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<210> 4
<211> 1411
<212> DNA
<213> Artificial Sequence

<220>
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aaggcctgta acctgggaga aggcgtggcc cagccttgtg gcgctaatca gacagtgtgc 180

gagccctgcc tggactccgt gaccttctcc gatgtggtgt ccgccaccga gccttgcaag 240

ccctgcacag agtgtgtggg cctgcagtcc atgtccgccc cttgcgtgga agccgacgac 300

gccgtgtgta gatgcgccta cggctactac caggacgaga caaccggcag atgcgaggcc 360

tgcagagtgt gcgaagctgg ctctggcctg gtgttcagtt gtcaagacaa gcagaacacc 420

gtgtgcgagg aatgccccga cggcacctac tctgacgagg ccaatcacgt ggacccctgc 480

ctgccttgca ccgtgtgtga agataccgag cggcagctgc gcgagtgcac cagatgggct 540

gatgccgagt gcgaagagat ccctggccgg tggatcacca gatccacccc tccagagggc 600

tccgactcta ccgctccctc tacccaggaa cctgaggccc ctcctgagca ggacctgatc 660

gcttctacag tggccggcgt cgtgaccaca gtgatgggcg gaggcggcga gcctaagtcc 720

tccgacaaga cccacacctg tccccccttgt cctgcccctg aactgctggg cggaccttcc 780

gtgtttctgt tccccccaaa gcccaaggac accctgatga tctcccggac ccccgaagtg 840

acctgcgtgg tggtggatgt gtcccacgag gaccctgaag tgaagttcaa ttggtacgtg 900

gacggcgtgg aagtgcacaa cgccaagacc aagcccagag aggaacagta caactccacc 960

taccgggtgg tgtctgtgct gaccgtgctg caccaggact ggctgaacgg caaagagtac 1020

aagtgcaagg tgtccaacaa ggccctgcca gcccccatcg aaaagaccat ctccaaggcc 1080

aagggccagc cccgggaacc ccaggtgtac acactgcccc ctagcaggga cgagctgacc 1140

aagaaccagg tgtccctgac ctgtctcgtg aagggcttct acccctccga tatcgccgtg 1200

gaatgggagt ccaacggcca gcctgagaac aactacaaga ccacccccc tgtgctggac 1260

agcgacggct cattctttct gtactccaag ctgacagtgg acaagtcccg gtggcagcag 1320

ggcaacgtgt tctcctgcag cgtgatgcac gaggctctgc acaaccacta cacccagaag 1380

tccctgtccc tgagccccgg ctgatgaatt c 1411

<210> 5
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Secretase site

<400> 5

Gly Ser Ser Gln Pro Val Val Thr Arg Gly Thr Thr Asp Asn Asp Ile
1 5 10 15

Glu Gly Arg Met Asp
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<210> 6
<211> 51
<212> PRT
<213> Artificial Sequence

<220>
<223> Partial sequence for sequence alignment.

<400> 6

Ile Ala Ser Thr Val Ala Gly Val Val Thr Thr Val Met Gly Ser Ser
1 5 10 15

Gln Pro Val Val Thr Arg Gly Thr Thr Asp Asn Leu Ile Pro Val Tyr
20 25 30

Cys Ser Ile Leu Ala Ala Val Val Val Gly Leu Val Ala Tyr Ile Ala
35 40 45

Phe Lys Arg
50

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

<220>
<223> Partial sequence for sequence alignment

<400> 7

Ile Ala Ser Thr Val Ala Gly Val Val Thr Thr Val Met Gly Ile Pro
1 5 10 15

Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr
20 25 30

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
35 40 45

Leu Phe
50

<210> 8
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Partial sequence for sequence alignment

<400> 8

Ile Ala Ser Thr Val Ala Gly Val Val Thr Thr Val Met Gly Ile Pro
1 5 10 15

Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr
20 25 30

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
35 40 45

Leu Phe
50

<210> 9
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Partial sequence for sequence alignment

<400> 9

Ile Ala Ser Thr Val Ala Gly Val Val Thr Thr Val Met Gly Ile Pro
1 5 10 15

Lys Val Asp Lys Lys Val Glu Pro Lys Ser Ser Asp Lys Thr His Thr
20 25 30

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
35 40 45

Leu Phe
50

<210> 10
<211> 45
<212> PRT
<213> Artificial Sequence

<220>
<223> Partial sequence for sequence alignment

<400> 10

Ile Ala Ser Thr Val Ala Gly Val Val Thr Thr Val Met Gly Gly Gly
1 5 10 15

Gly Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro
20 25 30

Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

<210> 11
<211> 46
<212> PRT
<213> Artificial Sequence

<220>
<223> Partial sequence for sequence alignment

<400> 11

Ile Ala Ser Thr Val Ala Gly Val Val Thr Thr Val Met Gly Gly Gly
1 5 10 15

Gly Ser Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys
20 25 30

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

<210> 12
<211> 51
<212> PRT
<213> Artificial Sequence

<220>
<223> Partial sequence for sequence alignment

<400> 12

Ile Ala Ser Thr Val Ala Gly Val Val Thr Thr Val Met Gly Gly Gly
1 5 10 15

Gly Ser Gly Gly Gly Gly Ser Glu Pro Lys Ser Ser Asp Lys Thr His
20 25 30

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
35 40 45

Phe Leu Phe
50

<210> 13
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Partial sequence for sequence alignment

<400> 13

Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr
1 5 10 15

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
20 25 30

Val Phe Leu Phe
35

<210> 14
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Linker sequence

<400> 14

Ala Glu Ala Ala Ala Lys Ala
1 5

<210> 15
<211> 410
<212> PRT
<213> Artificial

<220>
<223> Fusion Protein

<400> 15

```
Lys Glu Ala Cys Pro Thr Gly Leu Tyr Thr His Ser Gly Glu Cys Cys
1               5                   10                  15


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


Gln Thr Val Cys Glu Pro Cys Leu Asp Ser Val Thr Phe Ser Asp Val
        35                  40                  45


Val Ser Ala Thr Glu Pro Cys Lys Pro Cys Thr Glu Cys Val Gly Leu
    50                  55                  60


Gln Ser Met Ser Ala Pro Cys Val Glu Ala Asp Asp Ala Val Cys Arg
65                  70                  75                  80


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


Cys Arg Val Cys Glu Ala Gly Ser Gly Leu Val Phe Ser Cys Gln Asp
            100                 105                 110


Lys Gln Asn Thr Val Cys Glu Glu Cys Pro Asp Gly Thr Tyr Ser Asp
        115                 120                 125


Glu Ala Asn His Val Asp Pro Cys Leu Pro Cys Thr Val Cys Glu Asp
    130                 135                 140


Thr Glu Arg Gln Leu Arg Glu Cys Thr Arg Trp Ala Asp Ala Glu Cys
145                 150                 155                 160
```

```
Glu Glu Ile Pro Gly Arg Trp Ile Thr Arg Ser Thr Pro Pro Glu Gly
                165                 170                 175

Gly Gly Gly Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro
            180                 185                 190

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
        195                 200                 205

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
    210                 215                 220

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
225                 230                 235                 240

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
                245                 250                 255

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
            260                 265                 270

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
        275                 280                 285

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
    290                 295                 300

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
305                 310                 315                 320

Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
                325                 330                 335

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
            340                 345                 350
```

```
Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
        355                 360                 365

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
    370                 375                 380

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
385                 390                 395                 400

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
                405                 410
```