SEQUENCE LISTING

<110> SANOFI

<120> Prodrugs comprising a GLP-1/Glucagon dual agonist linker hyaluronic acid conjugate

<130> DE2015/071 WO PCT - 60235P WO

<150> EP 15 305 858.1
<151> 2015-06-05

<160> 60

<170> PatentIn version 3.5

<210> 1
<211> 39
<212> PRT
<213> Heloderma suspectum

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 1

```
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1               5                   10                  15


Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20                  25                  30


Ser Gly Ala Pro Pro Pro Ser
        35
```

<210> 2
<211> 30
<212> PRT
<213> Homo sapiens

<220>

<221> MOD_RES
<222> (30)..(30)
<223> Amidated C-terminus

<400> 2

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
20 25 30

<210> 3
<211> 29
<212> PRT
<213> Homo sapiens

<400> 3

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 4
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 4

His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

```
Gln Arg Ala Lys Glu Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20                  25                  30


Ser Gly Ala Pro Pro Pro Ser
        35


<210>  5
<211>  39
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Exendin-4 analogue


<220>
<221>  MOD_RES
<222>  (39)..(39)
<223>  Amidated C-terminus

<400>  5

His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1               5                   10                  15


Gln Arg Ala Lys Glu Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Val
            20                  25                  30


Ser Gly Ala Pro Pro Pro Ser
        35


<210>  6
<211>  39
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Exendin-4 analogue


<220>
<221>  MOD_RES
```

<222> (2)..(2)
<223> Xaa is D-Ser

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 6

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Arg Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 7
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is D-Ser

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 7

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Arg Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Val

eolf-seql

20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 8
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 8

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Arg Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 9
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 9

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Arg Ala Gln Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 10
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 10

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Arg Ala Lys Asp Phe Ile Glu Trp Leu Ile Ser Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 11
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 11

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Arg Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 12
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 12

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Arg Ala His Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 13
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 13

```
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1               5                   10                  15


Gln Arg Ala Lys Glu Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20                  25                  30


Ser Gly Ala Pro Pro Pro Ser
        35


<210>  14
<211>  39
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Exendin-4 analogue


<220>
<221>  MOD_RES
<222>  (2)..(2)
<223>  Xaa is Aib

<220>
<221>  MOD_RES
<222>  (39)..(39)
<223>  Amidated C-terminus

<400>  14

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1               5                   10                  15


Gln Arg Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Val
            20                  25                  30


Ser Gly Ala Pro Pro Pro Ser
        35


<210>  15
<211>  39
```

<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 15

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Arg Ala Gln Asp Phe Ile Glu Trp Leu Ile Ser Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 16
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 16

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

1 5 10 15

Gln Arg Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Val
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 17
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is D-Ser

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 17

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Arg Ala Lys Glu Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Val
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 18
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is D-Ser

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 18

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Arg Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Val
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 19
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 19

His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Arg Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Val
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 20
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 20

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Arg Ala Lys Glu Phe Ile Glu Trp Leu Ile Ser Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 21
<211> 39
<212> PRT
<213> Artificial Sequence

<220>

<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is D-Ser

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 21

```
His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1               5                   10                  15


Gln Arg Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20                  25                  30


Ser Gly Ala Pro Pro Pro Ser
        35
```

<210> 22
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is D-Ser

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 22

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Lys Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 23
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 23

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 24
<211> 39
<212> PRT

<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 24

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala His Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 25
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is D-Ser

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 25

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Leu Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 26
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 26

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Leu Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 27
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 27

His Ser His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 28
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 28

His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 29
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 29

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Leu Ala Lys Glu Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 30
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 30

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Leu Ala Lys Asp Phe Ile Glu Trp Leu Ile Ser Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 31
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 31

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu

1 5 10 15

Gln Leu Ala Lys Asp Phe Ile Glu Trp Leu Ile Lys Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 32
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 32

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Val
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 33
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is D-Ser

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 33

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Leu Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 34
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 34

His Ser His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Leu Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 35
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 35

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Leu Ala Lys Glu Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 36
<211> 39
<212> PRT
<213> Artificial Sequence

<220>

<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 36

```
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1               5                   10                  15


Gln Leu Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20                  25                  30


Ser Gly Ala Pro Pro Pro Ser
        35
```

<210> 37
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 37

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln His Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 38
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 38

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Gln Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 39
<211> 39
<212> PRT

<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 39

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Gln Glu Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 40
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is D-Ser

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 40

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Leu Leu Asp Glu
1   5   10   15

Gln Arg Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 41
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 41

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Leu Leu Asp Glu
1   5   10   15

Gln Leu Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 42
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is D-Ser

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 42

```
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Leu Leu Asp Glu
1               5                   10                  15

Gln Arg Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Val
            20                  25                  30

Ser Gly Ala Pro Pro Pro Ser
        35
```

<210> 43
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is D-Ser

<220>

<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 43

```
His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Leu Leu Asp Glu
1               5                   10                  15


Gln Leu Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20                  25                  30


Ser Gly Ala Pro Pro Pro Ser
        35
```

<210> 44
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 44

```
His Ser His Gly Thr Phe Thr Ser Asp Leu Ser Lys Leu Leu Asp Glu
1               5                   10                  15


Gln Leu Ala Lys Asp Phe Ile Glu Trp Leu Ile Ala Gly Gly Pro Ser
            20                  25                  30


Ser Gly Ala Pro Pro Pro Ser
        35
```

<210> 45
<211> 39

<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 45

```
His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1               5                   10                  15


Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Gly Gly Pro Ser
            20                  25                  30


Ser Gly Ala Pro Pro Pro Ser
        35
```

<210> 46
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)

<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 46

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Gly Gly Pro Pro
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 47
<211> 41
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (41)..(41)

<223> Amidated C-terminus

<400> 47

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Gly Gly Pro Pro
20 25 30

Ser Gly Pro Pro Pro Pro Pro Pro Pro
35 40

<210> 48
<211> 41
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (29)..(29)
<223> D-Ala

<220>
<221> MOD_RES
<222> (34)..(34)
<223> D-Ala

<220>
<221> MOD_RES
<222> (41)..(41)

<223> Amidated C-terminus

<400> 48

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Xaa Gly Pro Pro
20 25 30

Ser Xaa Pro Pro Pro Pro Pro Pro Pro
35 40

<210> 49
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 49

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Gly Gly Pro His
20 25 30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 50
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 50

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Pro Gly Pro Ser
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 51
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 51

```
His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1               5                   10                  15


Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Pro Gly Pro Pro
            20                  25                  30


Ser Gly Ala Pro Pro Pro Ser
        35
```

<210> 52
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 52

```
His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1               5                   10                  15


Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Pro Gly Pro His
            20                  25                  30


Ser Gly Ala Pro Pro Pro Ser
        35
```

<210> 53
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 53

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Gly Gly Pro Pro
20 25 30

Ser Gly Lys Pro Pro Pro Ser
35

<210> 54
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 54

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Gly Gly His Pro
20 25 30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 55
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 55

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Gly Gly Trp Pro
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 56
<211> 39
<212> PRT
<213> Artificial Sequence

<220>

<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 56

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Gly Gly His Pro
20 25 30

Ser Gly Lys Pro Pro Pro Ser
35

<210> 57
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES

<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 57

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Gly Gly Pro Pro
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 58
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 58

eolf-seql

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1   5   10   15

Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Gly Gly Pro Arg
            20   25   30

Ser Gly Ala Pro Pro Pro Ser
        35

<210> 59
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (29)..(29)
<223> D-Ala

<220>
<221> MOD_RES
<222> (34)..(34)
<223> D-Ala

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 59

eolf-seql

His Xaa His Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Asp Glu
1 5 10 15

Gln Leu Ala Arg Asp Phe Ile Glu Trp Leu Ile Xaa Xaa Gly Pro Pro
            20 25 30

Ser Xaa Ala Pro Pro Pro Ser
        35

<210> 60
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Exendin-4 analogue

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (28)..(28)
<223> bAla

<220>
<221> MOD_RES
<222> (29)..(29)
<223> D-Ala

<220>
<221> MOD_RES
<222> (34)..(34)
<223> D-Ala

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Amidated C-terminus

<400> 60

eolf-seql

```
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Leu Leu Glu Glu
1               5                   10                  15


Gln Arg Ala Arg Glu Phe Ile Glu Trp Leu Ile Xaa Xaa Gly Pro Pro
            20                  25                  30


Ser Xaa Ala Pro Pro Pro Ser
        35
```