



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁶ : C07K 14/605, A61K 38/26</p>	<p>A1</p>	<p>(11) International Publication Number: WO 99/43706</p> <p>(43) International Publication Date: 2 September 1999 (02.09.99)</p>
<p>(21) International Application Number: PCT/DK99/00082</p> <p>(22) International Filing Date: 25 February 1999 (25.02.99)</p> <p>(30) Priority Data: 0268/98 27 February 1998 (27.02.98) DK</p> <p>(71) Applicant: NOVO NORDISK A/S [DK/DK]; Novo Allé, DK-2880 Bagsvaerd (DK).</p> <p>(72) Inventors: KNUDSEN, Liselotte, Bjerre; Valby Langgade 49A, 1. tv., DK-2500 Valby (DK). HUUSFELDT, Per, Olaf; Applebys Plads 27,5. mf., DK-1411 Copenhagen K (DK). NIELSEN, Per, Franklin; Dalsø Park 59, DK-3500 Værløse (DK). PEDERSEN, Freddy, Zimmerdahl; Tårnhøjgårdvej 26, DK-3500 Værløse (DK).</p>	<p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report.</i></p>	
<p>(54) Title: DERIVATIVES OF GLP-1 ANALOGS</p>		
<p>(57) Abstract</p> <p>The present invention relates to derivatives of GLP-1 analogs having a lipophilic substituent. The derivatives of GLP-1 analogs of the present invention have a protracted profile of action.</p>		

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						

DERIVATIVES OF GLP-1 ANALOGS**FIELD OF THE INVENTION**

The present invention relates to novel derivatives of human glucagon-like peptide-1 (GLP-1) and fragments thereof and analogues of such fragments which have a protracted profile of action and to methods of making and using them.

BACKGROUND OF THE INVENTION

Peptides are widely used in medical practice, and since they can be produced by recombinant DNA technology it can be expected that their importance will increase also in the years to come. When native peptides or analogues thereof are used in therapy it is generally found that they have a high clearance. A high clearance of a therapeutic agent is inconvenient in cases where it is desired to maintain a high blood level thereof over a prolonged period of time since repeated administrations will then be necessary. Examples of peptides which have a high clearance are: ACTH, corticotropin-releasing factor, angiotensin, calcitonin, insulin, glucagon, glucagon-like peptide-1, glucagon-like peptide-2, insulin-like growth factor-1, insulin-like growth factor-2, gastric inhibitory peptide, growth hormone-releasing factor, pituitary adenylate cyclase activating peptide, secretin, enterogastrin, somatostatin, somatotropin, somatomedin, parathyroid hormone, thrombopoietin, erythropoietin, hypothalamic releasing factors, prolactin, thyroid stimulating hormones, endorphins, enkephalins, vasopressin, oxytocin, opioids and analogues thereof, superoxide dismutase, interferon, asparaginase, arginase, arginine deaminase, adenosine deaminase and ribonuclease. In some cases it is possible to influence the release profile of peptides by applying suitable pharmaceutical compositions, but this approach has various shortcomings and is not generally applicable.

The hormones regulating insulin secretion belong to the so-called enteroinsular axis, designating a group of hormones, released from the gastrointestinal mucosa in response to the presence and absorption of nutrients in the gut, which promote an early and potentiated release of insulin. The enhancing effect on insulin secretion, the so-called incretin effect, is probably essential for a normal glucose tolerance. Many of the gastrointestinal hormones, including gastrin and secretin (cholecystokinin is not insulinotropic in man), are insulinotropic, but the only physiologically important ones, those that are responsible for the incretin effect, are the glucose-dependent insulinotropic polypeptide, GIP, and glucagon-like peptide-1 (GLP-1). Because of its insulinotropic effect, GIP, isolated in 1973 (1) immediately attracted considerable interest among diabetologists. However, numerous investigations carried

out during the following years clearly indicated that a defective secretion of GIP was not involved in the pathogenesis of insulin dependent diabetes mellitus (IDDM) or non insulin-dependent diabetes mellitus (NIDDM) (2). Furthermore, as an insulinotropic hormone, GIP was found to be almost ineffective in NIDDM (2). The other incretin hormone, GLP-1 is the most potent insulinotropic substance known (3). Unlike GIP, it is surprisingly effective in stimulating insulin secretion in NIDDM patients. In addition, and in contrast to the other insulinotropic hormones (perhaps with the exception of secretin) it also potently inhibits glucagon secretion. Because of these actions it has pronounced blood glucose lowering effects particularly in patients with NIDDM.

10 GLP-1, a product of the proglucagon (4), is one of the youngest members of the secretin-VIP family of peptides, but is already established as an important gut hormone with regulatory function in glucose metabolism and gastrointestinal secretion and metabolism (5). The glucagon gene is processed differently in the pancreas and in the intestine. In the pancreas (9), the processing leads to the formation and parallel secretion of 1) glucagon itself, occupying positions 33-61 of proglucagon (PG); 2) an N-terminal peptide of 30 amino acids (PG (1-30)) often called glicentin-related pancreatic peptide, GRPP (10, 11); 3) a hexapeptide corresponding to PG (64-69); 4) and, finally, the so-called major proglucagon fragment (PG (72-158)), in which the two glucagon-like sequences are buried (9). Glucagon seems to be the only biologically active product. In contrast, in the intestinal mucosa, it is glucagon that is buried in a larger molecule, while the two glucagon-like peptides are formed separately (8). The following products are formed and secreted in parallel: 1) glicentin, corresponding to PG (1-69), with the glucagon sequence occupying residues Nos. 33-61 (12); 2) GLP-1(7-36)amide (PG (78-107))amide (13), not as originally believed PG (72-107)amide or 108, which is inactive). Small amounts of C-terminally glycine-extended but equally bioactive GLP-1(7-37), (PG (78-108)) are also formed (14); 3) intervening peptide-2 (PG (111-122)amide) (15); and 4) GLP-2 (PG (126-158)) (15, 16). A fraction of glicentin is cleaved further into GRPP (PG (1-30)) and oxyntomodulin (PG (33-69)) (17, 18). Of these peptides, GLP-1, has the most conspicuous biological activities.

30 Being secreted in parallel with glicentin/enteroglucagon, it follows that the many studies of enteroglucagon secretion (6, 7) to some extent also apply to GLP-1 secretion, but GLP-1 is metabolised more quickly with a plasma half-life in humans of 2 min (19). Carbohydrate or fat-rich meals stimulate secretion (20), presumably as a result of direct interaction of yet unabsorbed nutrients with the microvilli of the open-type L-cells of the gut mucosa. En-

ocrine or neural mechanisms promoting GLP-1 secretion may exist but have not yet been demonstrated in humans.

The incretin function of GLP-1(29-31) has been clearly illustrated in experiments with the GLP-1 receptor antagonist, exendin 9-39, which dramatically reduces the incretin effect elicited by oral glucose in rats (21, 22). The hormone interacts directly with the β -cells via the GLP-1 receptor (23) which belongs to the glucagon/VIP/calcitonin family of G-protein-coupled 7-transmembrane spanning receptors. The importance of the GLP-1 receptor in regulating insulin secretion was illustrated in recent experiments in which a targeted disruption of the GLP-1 receptor gene was carried out in mice. Animals homozygous for the disruption had greatly deteriorated glucose tolerance and fasting hyperglycaemia, and even heterozygous animals were glucose intolerant (24). The signal transduction mechanism (25) primarily involves activation of adenylate cyclase, but elevations of intracellular Ca^{2+} are also essential (25, 26). The action of the hormone is best described as a potentiation of glucose stimulated insulin release (25), but the mechanism that couples glucose and GLP-1 stimulation is not known. It may involve a calcium-induced calcium release (26, 27). As already mentioned, the insulinotropic action of GLP-1 is preserved in diabetic β -cells. The relation of the latter to its ability to convey "glucose competence" to isolated insulin-secreting cells (26, 28), which respond poorly to glucose or GLP-1 alone, but fully to a combination of the two, is also not known. Equally importantly, however, the hormone also potently inhibits glucagon secretion (29). The mechanism is not known, but seems to be paracrine, via neighbouring insulin or somatostatin cells (25). Also the glucagonostatic action is glucose-dependent, so that the inhibitory effect decreases as blood glucose decreases. Because of this dual effect, if the plasma GLP-1 concentrations increase either by increased secretion or by exogenous infusion the molar ratio of insulin to glucagon in the blood that reaches the liver via the portal circulation is greatly increased, whereby hepatic glucose production decreases (30). As a result blood glucose concentrations decrease. Because of the glucose dependency of the insulinotropic and glucagonostatic actions, the glucose lowering effect is self-limiting, and the hormone, therefore, does not cause hypoglycaemia regardless of dose (31). The effects are preserved in patients with diabetes mellitus (32), in whom infusions of slightly supra-physiological doses of GLP-1 may completely normalise blood glucose values in spite of poor metabolic control and secondary failure to sulphonylurea (33). The importance of the glucagonostatic effect is illustrated by the finding that GLP-1 also lowers blood glucose in type-1 diabetic patients without residual β -cell secretory capacity (34).

In addition to its effects on the pancreatic islets, GLP-1 has powerful actions on the gastrointestinal tract. Infused in physiological amounts, GLP-1 potently inhibits pentagastrin-induced as well as meal-induced gastric acid secretion (35, 36). It also inhibits gastric emptying rate and pancreatic enzyme secretion (36). Similar inhibitory effects on gastric and pancreatic secretion and motility may be elicited in humans upon perfusion of the ileum with carbohydrate- or lipid-containing solutions (37, 38). Concomitantly, GLP-1 secretion is greatly stimulated, and it has been speculated that GLP-1 may be at least partly responsible for this so-called "ileal-brake" effect (38). In fact, recent studies suggest that, physiologically, the ileal-brake effects of GLP-1 may be more important than its effects on the pancreatic islets. Thus, in dose response studies GLP-1 influences gastric emptying rate at infusion rates at least as low as those required to influence islet secretion (39).

GLP-1 seems to have an effect on food intake. Intraventricular administration of GLP-1 profoundly inhibits food intake in rats (40, 42). This effect seems to be highly specific. Thus, N-terminally extended GLP-1 (PG 72-107)amide is inactive and appropriate doses of the GLP-1 antagonist, exendin 9-39, abolish the effects of GLP-1 (41). Acute, peripheral administration of GLP-1 does not inhibit food intake acutely in rats (41, 42). However, it remains possible that GLP-1 secreted from the intestinal L-cells may also act as a satiety signal.

Not only the insulinotropic effects but also the effects of GLP-1 on the gastrointestinal tract are preserved in diabetic patients (43), and may help curtailing meal-induced glucose excursions, but, more importantly, may also influence food intake. Administered intravenously, continuously for one week, GLP-1 at 4 ng/kg/min has been demonstrated to dramatically improve glycaemic control in NIDDM patients without significant side effects (44). The peptide is fully active after subcutaneous administration (45), but is rapidly degraded mainly due to degradation by dipeptidyl peptidase IV-like enzymes (46, 47).

The amino acid sequence of GLP-1 is given *i.a.* by Schmidt *et al.* (*Diabetologia* **28** 704-707 (1985)). Human GLP-1 is a 37 amino acid residue peptide originating from preproglucagon which is synthesised, *i.a.* in the L-cells in the distal ileum, in the pancreas and in the brain. Processing of preproglucagon to GLP-1(7-36)amide, GLP-1(7-37) and GLP-2 occurs mainly in the L-cells. Although the interesting pharmacological properties of GLP-1(7-37) and analogues thereof have attracted much attention in recent years only little is known about the structure of these molecules. The secondary structure of GLP-1 in micelles has been described by Thorton *et al.* (*Biochemistry* **33** 3532-3539 (1994)), but in normal solution, GLP-1 is considered a very flexible molecule. Surprisingly, we found that derivatisation of this relati-

very small and very flexible molecule resulted in compounds whose plasma profile were highly protracted and still had retained activity.

GLP-1 and analogues of GLP-1 and fragments thereof are useful *i.a.* in the treatment of Type 1 and Type 2 diabetes and obesity.

5 WO 87/06941 discloses GLP-1 fragments, including GLP-1(7-37), and functional derivatives thereof and to their use as an insulinotropic agent.

WO. 90/11296 discloses GLP-1 fragments, including GLP-1(7-36), and functional derivatives thereof which have an insulinotropic activity which exceeds the insulinotropic activity of GLP-1(1-36) or GLP-1(1-37) and to their use as insulinotropic agents.

10 The amino acid sequence of GLP-1 (7-36) and GLP-1 (7-37) is:

7 8 9 10 11 12 13 14 15 16 17

His-Ala-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Val-Ser-

18 19 20 21 22 23 24 25 26 27 28

15 Ser-Tyr-Leu-Glu-Gly-Gln-Ala-Ala-Lys-Glu-Phe-

29 30 31 32 33 34 35 36

Ile-Ala-Trp-Leu-Val-Lys-Gly-Arg-X

(I)

20 wherein X is NH₂ for GLP-1(7-36) and X is Gly for GLP-1(7-37).

WO 91/11457 discloses analogues of the active GLP-1 peptides 7-34, 7-35, 7-36, and 7-37 which can also be useful as GLP-1 moieties.

Unfortunately, the high clearance limits the usefulness of these compounds. Thus there still is a need for improvements in this field. Accordingly, it is an object of the present invention to provide derivatives of GLP-1 and analogues thereof which have a protracted profile of action relative to GLP-1(7-37). It is a further object of the invention to provide derivatives of GLP-1 and analogues thereof which have a lower clearance than GLP-1(7-37). It is a further object of the invention to provide a pharmaceutical composition comprising a compound of the invention and to use a compound of the invention to provide such a composition. Also, it is an object of the present invention to provide a method of treating insulin dependent and non-insulin dependent diabetes mellitus.

25
30

References.

1. Pederson RA. Gastric Inhibitory Polypeptide. In Walsh JH, Dockray GJ (eds) Gut peptides: Biochemistry and Physiology. Raven Press, New York 1994, pp. 217-259.
2. Krarup T. Immunoreactive gastric inhibitory polypeptide. *Endocr Rev* 1988;9:122-134.
3. Ørskov C. Glucagon-like peptide-1, a new hormone of the enteroinsular axis. *Diabetologia* 1992; 35:701-711.
- 5 4. Bell GI, Sanchez-Pescador R, Laybourn PJ, Najarian RC. Exon duplication and divergence in the human proglucagon gene. *Nature* 1983; 304: 368-371.
5. Holst JJ. Glucagon-like peptide-1 (GLP-1) - a newly discovered GI hormone. *Gastroenterology* 1994; 107: 1848-1855.
- 10 6. Holst JJ. Gut glucagon, enteroglucagon, gut GLI, glicentin - current status. *Gastroenterology* 1983;84:1602-1613.
7. Holst JJ, Ørskov C. Glucagon and other proglucagon-derived peptides. In Walsh JH, Dockray GJ, eds. Gut peptides: Biochemistry and Physiology. Raven Press, New York, pp. 305-340, 1993.
- 15 8. Ørskov C, Holst JJ, Knuhtsen S, Baldissera FGA, Poulsen SS, Nielsen OV. Glucagon-like peptides GLP-1 and GLP-2, predicted products of the glucagon gene, are secreted separately from the pig small intestine, but not pancreas. *Endocrinology* 1986;119:1467-1475.
9. Holst JJ, Bersani M, Johnsen AH, Kofod H, Hartmann B, Ørskov C. Proglucagon processing in porcine and human pancreas. *J Biol Chem*, 1994; 269: 18827-18833.
- 20 10. Moody AJ, Holst JJ, Thim L, Jensen SL. Relationship of glicentin to proglucagon and glucagon in the porcine pancreas. *Nature* 1981; 289: 514-516.
11. Thim L, Moody AJ, Purification and chemical characterisation of a glicentin-related pancreatic peptide (proglucagon fragment) from porcine pancreas. *Biochim Biophys*
- 25 *Acta* 1982;703:134-141.
12. Thim L, Moody AJ. The primary structure of glicentin (proglucagon). *Regul Pept* 1981;2:139-151.
13. Ørskov C, Bersani M, Johnsen AH, Højrup P, Holst JJ. Complete sequences of glucagon-like peptide-1 (GLP-1) from human and pig small intestine. *J. Biol. Chem.*
- 30 1989;264:12826-12829.
14. Ørskov C, Rabenhøj L, Kofod H, Wettergren A, Holst JJ. Production and secretion of amidated and glycine-extended glucagon-like peptide-1 (GLP-1) in man. *Diabetes* 1991; 43: 535-539.

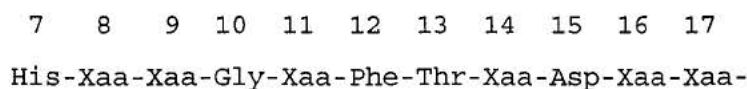
15. Buhl T, Thim L, Kofod H, Ørskov C, Harling H, & Holst JJ: Naturally occurring products of proglucagon 111-160 in the porcine and human small intestine. *J. Biol. Chem.* 1988;263:8621-8624.
16. Ørskov C, Buhl T, Rabenhøj L, Kofod H, Holst JJ: Carboxypeptidase-B-like processing of the C-terminus of glucagon-like peptide-2 in pig and human small intestine. *FEBS letters*, 1989;247:193-106.
17. Holst JJ. Evidence that enteroglucagon (II) is identical with the C-terminal sequence (residues 33-69) of glicentin. *Biochem J.* 1980;187:337-343.
18. Bataille D, Tatemoto K, Gespach C, Jörnvall H, Rosselin G, Mutt V. Isolation of glucagon-37 (bioactive enteroglucagon/oxyntomodulin) from porcine jejunum-ileum. Characterisation of the peptide. *FEBS Lett* 1982;146:79-86.
19. Ørskov C, Wettergren A, Holst JJ. The metabolic rate and the biological effects of GLP-1 7-36amide and GLP-1 7-37 in healthy volunteers are identical. *Diabetes* 1993;42:658-661.
20. Elliott RM, Morgan LM, Tredger JA, Deacon S, Wright J, Marks V. Glucagon-like peptide-1 (7-36)amide and glucose-dependent insulinotropic polypeptide secretion in response to nutrient ingestion in man: acute post-prandial and 24-h secretion patterns. *J Endocrinol* 1993; 138: 159-166.
21. Kolligs F, Fehmann HC, Göke R, Göke B. Reduction of the incretin effect in rats by the glucagon-like peptide-1 receptor antagonist exendin (9-39)amide. *Diabetes* 1995; 44: 16-19.
22. Wang Z, Wang RM, Owji AA, Smith DM, Ghatei M, Bloom SR. Glucagon-like peptide-1 is a physiological incretin in rat. *J. Clin. Invest.* 1995; 95: 417-421.
23. Thorens B. Expression cloning of the pancreatic b cell receptor for the gluco-incretin hormone glucagon-like peptide 1. *Proc Natl Acad Sci* 1992;89:8641-4645.
24. Scrocchi L, Auerbach AB, Joyner AL, Drucker DJ. Diabetes in mice with targeted disruption of the GLP-1 receptor gene. *Diabetes* 1996; 45: 21A.
25. Fehmann HC, Göke R, Göke B. Cell and molecular biology of the incretin hormones glucagon-like peptide-I (GLP-1) and glucose-dependent insulin releasing polypeptide (GIP). *Endocrine Reviews*, 1995; 16: 390-410.
26. Gromada J, Dissing S, Bokvist K, Renström E, Frøkjær-Jensen J, Wulff BS, Rorsman P. Glucagon-like peptide I increases cytoplasmic calcium in insulin-secreting bTC3-cells by enhancement of intracellular calcium mobilisation. *Diabetes* 1995; 44: 767-774.

27. Holz GG, Leech CA, Habener JF. Activation of a cAMP-regulated Ca²⁺-signaling pathway in pancreatic β -cells by the insulinotropic hormone glucagon-like peptide-1. *J Biol Chem*, 1996; 270: 17749-17759.
28. Holz GG, Kühlreiber WM, Habener JF. Pancreatic beta-cells are rendered glucose competent by the insulinotropic hormone glucagon-like peptide-1(7-37). *Nature* 1993;361:362-365.
29. Ørskov C, Holst JJ, Nielsen OV: Effect of truncated glucagon-like peptide-1 (proglucagon 78-107 amide) on endocrine secretion from pig pancreas, antrum and stomach. *Endocrinology* 1988;123:2009-2013.
30. Hvidberg A, Toft Nielsen M, Hilsted J, Ørskov C, Holst JJ. Effect of glucagon-like peptide-1 (proglucagon 78-107amide) on hepatic glucose production in healthy man. *Metabolism* 1994;43:104-108.
31. Qualmann C, Nauck M, Holst JJ, Ørskov C, Creutzfeldt W. Insulinotropic actions of intravenous glucagon-like peptide-1 [7-36 amide] in the fasting state in healthy subjects. *Acta Diabetologica*, 1995; 32: 13-16.
32. Nauck MA, Heimesaat MM, Ørskov C, Holst JJ, Ebert R, Creutzfeldt W. Preserved incretin activity of GLP-1(7-36amide) but not of synthetic human GIP in patients with type 2-diabetes mellitus. *J Clin Invest* 1993;91:301-307.
33. Nauck MA, Kleine N, Ørskov C, Holst JJ, Willms B, Creutzfeldt W. Normalisation of fasting hyperglycaemia by exogenous GLP-1(7-36amide) in type 2-diabetic patients. *Diabetologia* 1993;36:741-744.
34. Creutzfeldt W, Kleine N, Willms B, Ørskov C, Holst JJ, Nauck MA. Glucagonostatic actions and reduction of fasting hyperglycaemia by exogenous glucagon-liem, peptide-1(7-36amide) in type I diabetic patients. *Diabetes Care* 1996; 19: 580-586.
35. Schjoldager BTG, Mortensen PE, Christiansen J, Ørskov C, Holst JJ. GLP-1 (glucagon-like peptide-1) and truncated GLP-1, fragments of human proglucagon, inhibit gastric acid secretion in man. *Dig. Dis. Sci.* 1989; 35:703-708.
36. Wettergren A, Schjoldager B, Mortensen PE, Myhre J, Christiansen J, Holst JJ. Truncated GLP-1 (proglucagon 72-107amide) inhibits gastric and pancreatic functions in man. *Dig Dis Sci* 1993;38:665-673.
37. Layer P, Holst JJ, Grandt D, Goebell H: Ileal release of glucagon-like peptide-1 (GLP-1): association with inhibition of gastric acid in humans. *Dig Dis Sci* 1995; 40: 1074-1082.

38. Layer P, Holst JJ. GLP-1: A humoral mediator of the ileal brake in humans? *Digestion* 1993; 54: 385-386.
39. Nauck M, Ettl R, Niedereichholz U, Ørskov C, Holst JJ, Schmiegel W. Inhibition of gastric emptying by GLP-1(7-36 amide) or (7-37): effects on postprandial glycaemia and insulin secretion. Abstract. *Gut* 1995; 37 (suppl. 2): A124.
40. Schick RR, vom Walde T, Zimmermann JP, Schusdziarra V, Classen M. Glucagon-like peptide 1 - a novel brain peptide involved in feeding regulation. in Ditschuneit H, Gries FA, Hauner H, Schusdziarra V, Wechsler JG (eds.) *Obesity in Europe*. John Libbey & Company Ltd, 1994; pp. 363-367.
41. Tang-Christensen M, Larsen PJ, Göke R, Fink-Jensen A, Jessop DS, Møller M, Sheikh S. Brain GLP-1(7-36) amide receptors play a major role in regulation of food and water intake. *Am. J. Physiol.*, 1996, in press.
42. Turton MD, O'Shea D, Gunn I, Beak SA, Edwards CMB, Meeran K, et al. A role for glucagon-like peptide-1 in the regulation of feeding. *Nature* 1996; 379: 69-72.
43. Willms B, Werner J, Creutzfeldt W, Ørskov C, Holst JJ, Nauck M. Inhibition of gastric emptying by glucagon-like peptide-1 (7-36 amide) in patients with type-2-diabetes mellitus. *Diabetologia* 1994; 37, suppl.1: A118.
44. Larsen J, Jallad N, Damsbo P. One-week continuous infusion of GLP-1(7-37) improves glycaemic control in NIDDM. *Diabetes* 1996; 45, suppl. 2: 233A.
45. Ritzel R, Ørskov C, Holst JJ, Nauck MA. Pharmacokinetic, insulinotropic, and glucagonostatic properties of GLP-1 [7-36 amide] after subcutaneous injection in healthy volunteers. Dose-response relationships. *Diabetologia* 1995; 38: 720-725.
46. Deacon CF, Johnsen AH, Holst JJ. Degradation of glucagon-like peptide-1 by human plasma in vitro yields an N-terminally truncated peptide that is a major endogenous metabolite in vivo. *J Clin Endocrinol Metab* 1995; 80: 952-957.
47. Deacon CF, Nauck MA, Toft-Nielsen M, Pridal L, Willms B, Holst JJ. 1995. Both subcutaneous and intravenously administered glucagon-like peptide-1 are rapidly degraded from the amino terminus in type II diabetic patients and in healthy subjects. *Diabetes* 44: 1126-1131.

SUMMARY OF THE INVENTION

The present invention relates to derivatives of GLP-1 analogues of formula I:



18 19 20 21 22 23 24 25 26 27 28
 Xaa-Xaa-Xaa-Xaa-Xaa-Xaa-Xaa-Xaa-Xaa-Xaa-Phe-

5 29 30 31 32 33 34 35 36 37 38
 Ile-Xaa-Xaa-Xaa-Xaa-Xaa-Xaa-Xaa-Xaa-Xaa

39 40 41 42 43 44 45
 Xaa-Xaa-Xaa-Xaa-Xaa-Xaa-Xaa

10 (I)

wherein

- Xaa at position 8 is Ala, Gly, Ser, Thr, Leu, Ile, Val, Glu, Asp, or Lys,
- Xaa at position 9 is Glu, Asp, or Lys,
- Xaa at position 11 is Thr, Ala, Gly, Ser, Leu, Ile, Val, Glu, Asp, or Lys,
- 15 Xaa at position 14 is Ser, Ala, Gly, Thr, Leu, Ile, Val, Glu, Asp, or Lys,
- Xaa at position 16 is Val, Ala, Gly, Ser, Thr, Leu, Ile, Tyr, Glu, Asp, or Lys,
- Xaa at position 17 is Ser, Ala, Gly, Thr, Leu, Ile, Val, Glu, Asp, or Lys,
- Xaa at position 18 is Ser, Ala, Gly, Thr, Leu, Ile, Val, Glu, Asp, or Lys,
- Xaa at position 19 is Tyr, Phe, Trp, Glu, Asp, or Lys,
- 20 Xaa at position 20 is Leu, Ala, Gly, Ser, Thr, Leu, Ile, Val, Glu, Asp, or Lys,
- Xaa at position 21 is Glu, Asp, or Lys,
- Xaa at position 22 is Gly, Ala, Ser, Thr, Leu, Ile, Val, Glu, Asp, or Lys,
- Xaa at position 23 is Gln, Asn, Arg, Glu, Asp, or Lys,
- Xaa at position 24 is Ala, Gly, Ser, Thr, Leu, Ile, Val, Arg, Glu, Asp, or Lys,
- 25 Xaa at position 25 is Ala, Gly, Ser, Thr, Leu, Ile, Val, Glu, Asp, or Lys,
- Xaa at position 26 is Lys, Arg, Gln, Glu, Asp, or His,
- Xaa at position 27 is Glu, Asp, or Lys,
- Xaa at position 30 is Ala, Gly, Ser, Thr, Leu, Ile, Val, Glu, Asp, or Lys,
- Xaa at position 31 is Trp, Phe, Tyr, Glu, Asp, or Lys,
- 30 Xaa at position 32 is Leu, Gly, Ala, Ser, Thr, Ile, Val, Glu, Asp, or Lys,
- Xaa at position 33 is Val, Gly, Ala, Ser, Thr, Leu, Ile, Glu, Asp, or Lys,
- Xaa at position 34 is Lys, Arg, Glu, Asp, or His,
- Xaa at position 35 is Gly, Ala, Ser, Thr, Leu, Ile, Val, Glu, Asp, or Lys,
- Xaa at position 36 is Arg, Lys, Glu, Asp, or His,

- Xaa at position 37 is Gly, Ala, Ser, Thr, Leu, Ile, Val, Glu, Asp, or Lys, or is deleted,
Xaa at position 38 is Arg, Lys, Glu, Asp, or His, or is deleted,
Xaa at position 39 is Arg, Lys, Glu, Asp, or His, or is deleted,
Xaa at position 40 is Asp, Glu, or Lys, or is deleted,
5 Xaa at position 41 is Phe, Trp, Tyr, Glu, Asp, or Lys, or is deleted,
Xaa at position 42 is Pro, Lys, Glu, or Asp, or is deleted,
Xaa at position 43 is Glu, Asp, or Lys, or is deleted,
Xaa at position 44 is Glu, Asp, or Lys, or is deleted, and
Xaa at position 45 is Val, Glu, Asp, or Lys, or is deleted, or
10 (a) a C-1-6-ester thereof, (b) amide, C-1-6-alkylamide, or C-1-6-dialkylamide thereof and/or (c)
a pharmaceutically acceptable salt thereof,
provided that
- (i) when the amino acid at position 37, 38, 39, 40, 41, 42, 43 or 44 is deleted, then each amino acid downstream of the amino acid is also deleted,
 - 15 (ii) the derivative of the GLP-1 analog contains only one or two Lys,
 - (iii) the ϵ -amino group of one or both Lys is substituted with a lipophilic substituent optionally via a spacer,
 - (iv) the total number of different amino acids between the derivative of the GLP-1 analog and the corresponding native form of GLP-1 does not exceed six.

20

DETAILED DESCRIPTION OF THE INVENTION

A simple system is used to describe fragments and analogues of GLP-1. For example, Gly⁸-GLP-1(7-37) designates a fragment of GLP-1 formally derived from GLP-1 by deleting the amino acid residues Nos. 1 to 6 and substituting the naturally occurring amino acid residue
25 in position 8 (Ala) by Gly. Similarly, Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-37) designates GLP-1(7-37) wherein the ϵ -amino group of the Lys residue in position 34 has been tetradecanoylated. Where reference in this text is made to C-terminally extended GLP-1 analogues, the amino acid residue in position 38 is Arg unless otherwise indicated, the optional amino acid residue in position 39 is also Arg unless otherwise indicated and the optional amino acid residue in position
30 on 40 is Asp unless otherwise indicated. Also, if a C-terminally extended analogue extends to position 41, 42, 43, 44 or 45, the amino acid sequence of this extension is as in the corresponding sequence in human preproglucagon unless otherwise indicated.

GLP-1 Analogs

The present invention relates to derivatives of GLP-1 analogues. The derivatives of the invention have interesting pharmacological properties, in particular they have a more protracted profile of action than the parent peptides.

In the present text, the designation "an analogue" is used to designate a peptide wherein one or more amino acid residues of the parent peptide have been substituted by another amino acid residue.

The total number of different amino acids between the derivative of the GLP-1 analog and the corresponding native form of GLP-1 does not exceed six. Preferably, the number of different amino acids is five. More preferably, the number of different amino acids is four. Even more preferably, the number of different amino acids is three. Even more preferably, the number of different amino acids is two. Most preferably, the number of different amino acids is one. In order to determine the number of different amino acids, one should compare the amino acid sequence of the derivative of the GLP-1 analog of the present invention with the corresponding native GLP-1. For example, there are two different amino acids between the derivative Gly⁸Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-40) and the corresponding native GLP-1 (i.e., GLP-1(7-40)). The differences are located at positions 8 and 26. Similarly, there is only different amino acid between the derivative Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-40) and the corresponding native GLP-1. The difference is located at position 34.

The derivatives of the GLP-1 analogs of the present invention have only one or two Lys. The ε-amino group of one or both Lys is substituted with a lipophilic substituent. Preferably, the derivatives of the GLP-1 analogs of the present invention have only one Lys. In a more preferred embodiment, there is only one Lys which is located at the carboxy terminus of the derivative of the GLP-1 analogs. In an even more preferred embodiment, the derivatives of the GLP-1 analogs of the present invention have only one Lys and Glu or Asp is adjacent to Lys.

In a preferred embodiment, the amino acids at positions 37-45 are absent.

In another preferred embodiment, the amino acids at positions 38-45 are absent.

In another preferred embodiment, the amino acids at positions 39-45 are absent.

In another preferred embodiment, Xaa at position 8 is Ala, Gly, Ser, Thr, or Val.

In another preferred embodiment, Xaa at position 9 is Glu.

In another preferred embodiment, Xaa at position 11 is Thr.

In another preferred embodiment, Xaa at position 14 is Ser.

In another preferred embodiment, Xaa at position 16 is Val.

In another preferred embodiment, Xaa at position 17 is Ser.

- In another preferred embodiment, Xaa at position 18 is Ser, Lys, Glu, or Asp.
- In another preferred embodiment, Xaa at position 19 is Tyr, Lys, Glu, or Asp.
- In another preferred embodiment, Xaa at position 20 is Leu,, Lys, Glu, or Asp.
- In another preferred embodiment, Xaa at position 21 is Glu, Lys, or Asp.
- 5 In another preferred embodiment, Xaa at position 22 is Gly, Glu, Asp, or Lys.
- In another preferred embodiment, Xaa at position 23 is Gln, Glu, Asp, or Lys.
- In another preferred embodiment, Xaa at position 24 is Ala, Glu, Asp, or Lys.
- In another preferred embodiment, Xaa at position 25 is Ala, Glu, Asp, or Lys.
- In another preferred embodiment, Xaa at position 26 is Lys, Glu, Asp, or Arg.
- 10 In another preferred embodiment, Xaa at position 27 is Glu, Asp, or Lys.
- In another preferred embodiment, Xaa at position 30 is Ala, Glu, Asp, or Lys.
- In another preferred embodiment, Xaa at position 31 is Trp, Glu, Asp, or Lys.
- In another preferred embodiment, Xaa at position 32 is Leu, Glu, Asp, or Lys.
- In another preferred embodiment, Xaa at position 33 is Val, Glu, Asp, or Lys.
- 15 In another preferred embodiment, Xaa at position 34 is Lys, Arg, Glu, or Asp.
- In another preferred embodiment, Xaa at position 35 is Gly, Glu, Asp, or Lys.
- In another preferred embodiment, Xaa at position 36 is Arg, Lys, Glu, or Asp.
- In another preferred embodiment, Xaa at position 37 is Gly, Glu, Asp, or Lys.
- In another preferred embodiment, Xaa at position 38 is Arg, or Lys, or is deleted.
- 20 In another preferred embodiment, Xaa at position 39 is deleted.
- In another preferred embodiment, Xaa at position 40 is deleted.
- In another preferred embodiment, Xaa at position 41 is deleted.
- In another preferred embodiment, Xaa at position 42 is deleted.
- In another preferred embodiment, Xaa at position 43 is deleted.
- 25 In another preferred embodiment, Xaa at position 44 is deleted.
- In another preferred embodiment, Xaa at position 45 is deleted.
- In another preferred embodiment, Xaa at position 26 is Arg, each of Xaa at positions 37-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-36).
- In another preferred embodiment, Xaa at position 26 is Arg, each of Xaa at positions 38-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-37).
- 30 In another preferred embodiment, Xaa at position 26 is Arg, each of Xaa at positions 39-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-38).
- In another preferred embodiment, Xaa at position 34 is Arg, each of Xaa at positions 37-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-36).

In another preferred embodiment, Xaa at position 34 is Arg, each of Xaa at positions 38-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-37).

In another preferred embodiment, Xaa at position 34 is Arg, each of Xaa at positions 39-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-38).

5 In another preferred embodiment, Xaa at positions 26 and 34 is Arg, Xaa at position 36 is Lys, each of Xaa at positions 37-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-36).

10 In another preferred embodiment, Xaa at positions 26 and 34 is Arg, Xaa at position 36 is Lys, each of Xaa at positions 38-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-37).

In another preferred embodiment, Xaa at positions 26 and 34 is Arg, Xaa at position 36 is Lys, each of Xaa at positions 39-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-38).

15 In another preferred embodiment, Xaa at positions 26 and 34 is Arg, Xaa at position 38 is Lys, each of Xaa at positions 39-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-38).

In another preferred embodiment, Xaa at position 8 is Thr, Ser, Gly or Val, Xaa at position 37 is Glu, Xaa at position 36 is Lys, each of Xaa at positions 38-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-37).

20 In another preferred embodiment, Xaa at position 8 is Thr, Ser, Gly or Val, Xaa at position 37 is Glu, Xaa at position 36 is Lys, each of Xaa at positions 39-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-38).

25 In another preferred embodiment, Xaa at position 8 is Thr, Ser, Gly or Val, Xaa at position 37 is Glu, Xaa at position 38 is Lys, each of Xaa at positions 39-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-38).

In another preferred embodiment, Xaa at position 18, 23 or 27 is Lys, and Xaa at positions 26 and 34 is Arg, each of Xaa at positions 37-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-36).

30 In another preferred embodiment, Xaa at position 18, 23 or 27 is Lys, and Xaa at positions 26 and 34 is Arg, each of Xaa at positions 38-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-37).

In another preferred embodiment, Xaa at position 18, 23 or 27 is Lys, and Xaa at positions 26 and 34 is Arg, each of Xaa at positions 39-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-38).

In another preferred embodiment, Xaa at position 8 is Thr, Ser, Gly, or Val, Xaa at position 18, 23 or 27 is Lys, and Xaa at position 26 and 34 is Arg, each of Xaa at positions 37-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-36).

In another preferred embodiment, Xaa at position 8 is Thr, Ser, Gly, or Val, Xaa at position 18, 23 or 27 is Lys, and Xaa at position 26 and 34 is Arg, each of Xaa at positions 38-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-37).

In another preferred embodiment, Xaa at position 8 is Thr, Ser, Gly, or Val, Xaa at position 18, 23 or 27 is Lys, and Xaa at position 26 and 34 is Arg, each of Xaa at positions 39-45 is deleted, and each of the other Xaa is the amino acid in native GLP-1(7-38).

10

Derivatives

The term "derivative" is defined as a modification of one or more amino acid residues of a peptide by chemical means, either with or without an enzyme, *e.g.*, by alkylation, acylation, ester formation, or amide formation.

15

Lipophilic Substituents

To obtain a satisfactory protracted profile of action of the GLP-1 derivative, the lipophilic substituent attached to the GLP-1 moiety preferably comprises 4-40 carbon atoms, in particular 8-25 carbon atoms. The lipophilic substituent may be attached to an amino group of the GLP-1 moiety by means of a carboxyl group of the lipophilic substituent which forms an amide bond with an amino group of the amino acid residue to which it is attached.

20

In one preferred embodiment of the invention, the lipophilic substituent is attached to the GLP-1 moiety by means of a spacer in such a way that a carboxyl group of the spacer forms an amide bond with an amino group of the GLP-1 moiety. In a preferred embodiment, the spacer is an α,ω -amino acid. Examples of suitable spacers are succinic acid, Lys, Glu or Asp, or a dipeptide such as Gly-Lys. When the spacer is succinic acid, one carboxyl group thereof may form an amide bond with an amino group of the amino acid residue, and the other carboxyl group thereof may form an amide bond with an amino group of the lipophilic substituent. When the spacer is Lys, Glu or Asp, the carboxyl group thereof may form an amide bond with an amino group of the amino acid residue, and the amino group thereof may form an amide bond with a carboxyl group of the lipophilic substituent. When Lys is used as the spacer, a further spacer may in some instances be inserted between the ϵ -amino group of Lys and the lipophilic substituent. In one preferred embodiment, such a further spacer is succinic acid which forms an amide bond with the ϵ -amino group of Lys and with an amino group

25

30

present in the lipophilic substituent. In another preferred embodiment such a further spacer is Glu or Asp which forms an amide bond with the ϵ -amino group of Lys and another amide bond with a carboxyl group present in the lipophilic substituent, that is, the lipophilic substituent is a N^ε-acylated lysine residue. Other preferred spacers are N^ε-(γ -L-glutamyl), N^ε-(β -L-asparagyl),
5 N^ε-glycyl, and N^ε-(α -(γ -aminobutanoyl)).

In another preferred embodiment of the present invention, the lipophilic substituent has a group which can be negatively charged. One preferred group which can be negatively charged is a carboxylic acid group.

In a further preferred embodiment, the lipophilic substituent comprises from 4 to 40
10 carbon atoms, more preferred from 8 to 25 carbon atoms.

In a further preferred embodiment, the lipophilic substituent is attached to the parent peptide by means of a spacer which is an unbranched alkane α,ω -dicarboxylic acid group having from 1 to 7 methylene groups, preferably two methylene groups which spacer forms a bridge between an amino group of the parent peptide and an amino group of the lipophilic sub-
15 stituent.

In a further preferred embodiment, the lipophilic substituent is attached to the parent peptide by means of a spacer which is an amino acid residue except Cys, or a dipeptide such as Gly-Lys. In the present text, the expression "a dipeptide such as Gly-Lys" is used to designate a dipeptide wherein the C-terminal amino acid residue is Lys, His or Trp, preferably Lys,
20 and wherein the N-terminal amino acid residue is selected from the group comprising Ala, Arg, Asp, Asn, Gly, Glu, Gln, Ile, Leu, Val, Phe and Pro.

In a further preferred embodiment, the lipophilic substituent is attached to the parent peptide by means of a spacer which is an amino acid residue except Cys, or is a dipeptide such as Gly-Lys and wherein an amino group of the parent peptide forms an amide bond with
25 a carboxylic group of the amino acid residue or dipeptide spacer, and an amino group of the amino acid residue or dipeptide spacer forms an amide bond with a carboxyl group of the lipophilic substituent.

In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which comprises a partially or completely hydrogenated cyclo-
30 pentanophenathrene skeleton.

In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which is a straight-chain or branched alkyl group.

In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which is the acyl group of a straight-chain or branched fatty acid.

In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which is an acyl group selected from the group comprising $\text{CH}_3(\text{CH}_2)_n\text{CO}-$, wherein n is an integer from 4 to 38, preferably an integer from 4 to 24, more preferred selected from the group comprising $\text{CH}_3(\text{CH}_2)_6\text{CO}-$, $\text{CH}_3(\text{CH}_2)_8\text{CO}-$, $\text{CH}_3(\text{CH}_2)_{10}\text{CO}-$,
 5 $\text{CH}_3(\text{CH}_2)_{12}\text{CO}-$, $\text{CH}_3(\text{CH}_2)_{14}\text{CO}-$, $\text{CH}_3(\text{CH}_2)_{16}\text{CO}-$, $\text{CH}_3(\text{CH}_2)_{18}\text{CO}-$, $\text{CH}_3(\text{CH}_2)_{20}\text{CO}-$ and $\text{CH}_3(\text{CH}_2)_{22}\text{CO}-$.

In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which is an acyl group of a straight-chain or branched alkane α,ω -dicarboxylic acid.

10 In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which is an acyl group selected from the group comprising $\text{HOOC}(\text{CH}_2)_m\text{CO}-$, wherein m is an integer from 4 to 38, preferably an integer from 4 to 24, more preferred selected from the group comprising $\text{HOOC}(\text{CH}_2)_{14}\text{CO}-$, $\text{HOOC}(\text{CH}_2)_{16}\text{CO}-$, $\text{HOOC}(\text{CH}_2)_{18}\text{CO}-$, $\text{HOOC}(\text{CH}_2)_{20}\text{CO}-$ and $\text{HOOC}(\text{CH}_2)_{22}\text{CO}-$.

15 In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which is a group of the formula $\text{CH}_3(\text{CH}_2)_p((\text{CH}_2)_q\text{COOH})\text{CHNHCO}(\text{CH}_2)_2\text{CO}-$, wherein p and q are integers and $p+q$ is an integer of from 8 to 33, preferably from 12 to 28.

20 In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which is a group of the formula $\text{CH}_3(\text{CH}_2)_r\text{CONHCH}(\text{COOH})(\text{CH}_2)_2\text{CO}-$, wherein r is an integer of from 10 to 24.

In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which is a group of the formula $\text{CH}_3(\text{CH}_2)_s\text{CONHCH}((\text{CH}_2)_2\text{COOH})\text{CO}-$, wherein s is an integer of from 8 to 24.

25 In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which is a group of the formula $\text{COOH}(\text{CH}_2)_t\text{CO}-$ wherein t is an integer of from 8 to 24.

In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which is a group of the formula $-\text{NHCH}(\text{COOH})(\text{CH}_2)_4\text{NHCO}(\text{CH}_2)_u\text{CH}_3$, wherein u is an integer of from 8 to 18.
 30

In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which is a group of the formula $\text{CH}_3(\text{CH}_2)_v\text{CO-NH}(\text{CH}_2)_z\text{CO}$, wherein n is an integer of from 8 to 24 and z is an integer of from 1 to 6.

In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which is a group of the formula $\text{-NHCH(COOH)(CH}_2\text{)}_4\text{NH-COCH((CH}_2\text{)}_2\text{COOH)NH-CO(CH}_2\text{)}_w\text{CH}_3$, wherein w is an integer of from 10 to 16.

In a further preferred embodiment, the present invention relates to a GLP-1 derivative
5 having a lipophilic substituent which is a group of the formula $\text{-NHCH(COOH)(CH}_2\text{)}_4\text{NH-CO(CH}_2\text{)}_2\text{CH(COOH)NH-CO(CH}_2\text{)}_x\text{CH}_3$, wherein x is an integer of from 10 to 16.

In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which is a group of the formula $\text{-NHCH(COOH)(CH}_2\text{)}_4\text{NH-CO(CH}_2\text{)}_2\text{CH(COOH)NHCO(CH}_2\text{)}_y\text{CH}_3$, wherein y is zero or an integer of from 1 to 22.

10 In a further preferred embodiment, the present invention relates to a GLP-1 derivative having a lipophilic substituent which can be negatively charged. Such a lipophilic substituent can for example be a substituent which has a carboxyl group.

In a further preferred embodiment the present invention relates to a GLP-1 derivative of formula I provided that

15 a) when no spacer is present the lipophilic substituent is not selected from:

tetradecanoyl,

ω -carboxynonadecanoyl,

lithocholyl,

ω -carboxytridecanoyl,

20 ω -carboxyheptadecanoyl,

ω -carboxyundecanoyl,

ω -carboxyheptanoyl,

ω -carboxypentadecanoyl,

7-deoxycholoyl,

25 choloyl,

hexadecanoyl, and

b) the GLP-1 derivative of formula I is not selected from:

$\text{Glu}^{22,23,30}\text{Arg}^{26,34}\text{Lys}^{38}(\text{N}^\epsilon\text{-(}\gamma\text{-glutamyl(N}^\alpha\text{-tetradecanoyl)))-GLP-1(7-38)-OH,$

$\text{Glu}^{23,26}\text{Arg}^{34}\text{Lys}^{38}(\text{N}^\epsilon\text{-(}\gamma\text{-glutamyl(N}^\alpha\text{-tetradecanoyl)))-GLP-1(7-38)-OH,$

30 $\text{Lys}^{26,34}\text{-bis(N}^\epsilon\text{-(}\gamma\text{-glutamyl(N}^\alpha\text{-tetradecanoyl)))-GLP-1(7-37)-OH,$

$\text{Lys}^{26,34}\text{-bis(N}^\epsilon\text{-(}\gamma\text{-glutamyl(N}^\alpha\text{-hexadecanoyl)))-GLP-1(7-37)-OH,$

$\text{Arg}^{34}\text{Lys}^{26}(\text{N}^\epsilon\text{-(}\gamma\text{-glutamyl(N}^\alpha\text{-hexadecanoyl)))-GLP-1(7-37)-OH,$

$\text{Arg}^{26,34}\text{Lys}^{38}(\text{N}^\epsilon\text{-(}\gamma\text{-glutamyl(N}^\alpha\text{-tetradecanoyl)))-GLP-1(7-38)-OH,$

$\text{Arg}^{26,34}\text{Lys}^{38}(\text{N}^\epsilon\text{-(}\gamma\text{-glutamyl(N}^\alpha\text{-hexadecanoyl)))-GLP-1(7-38)-OH,$

Arg³⁴Lys²⁶(N^ε-(γ-glutamyl(N^α-tetradecanoyl)))-GLP-1(7-37)-OH,
 Arg^{26,34}Lys³⁸(N^ε-(γ-glutamyl(N^α-octadecanoyl)))-GLP-1(7-38)-OH.

In a further preferred embodiment the present invention relates to a GLP-1 derivative of formula I provided that it is not selected from:

- 5 Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-37),
 Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-37),
 Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-37),
 Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-37),
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-37),
 10 Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-37)-OH,
 Lys^{26,34}bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37)-OH,
 Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36)-OH,
 Arg^{26,34}Lys³⁸(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38)-OH,
 Arg³⁴Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37)-OH,
 15 Arg³⁴Lys²⁶(N^ε-(ω-carboxyheptadecanoyl))-GLP-1(7-37)-OH,
 Arg^{26,34}Lys³⁶(N^ε-(ω-carboxyheptadecanoyl))-GLP-1(7-37)-OH,
 Arg^{26,34}Lys³⁸(N^ε-(ω-carboxyheptadecanoyl))-GLP-1(7-38)-OH,
 Arg^{26,34}Lys³⁶(N^ε-(ω-carboxyheptadecanoyl))-GLP-1(7-36)-OH,
 Arg^{26,34}Lys³⁶(N^ε-(ω-carboxyundecanoyl))-GLP-1(7-37)-OH,
 20 Arg^{26,34}Lys³⁸(N^ε-(ω-carboxyundecanoyl))-GLP-1(7-38)-OH,
 Lys^{26,34}bis(N^ε-(ω-carboxyundecanoyl))-GLP-1(7-37)-OH,
 Arg^{26,34}Lys³⁶(N^ε-(ω-carboxyundecanoyl))-GLP-1(7-36)-OH,
 Arg³⁴Lys²⁶(N^ε-(ω-carboxyundecanoyl))-GLP-1(7-37)-OH,
 Arg³⁴Lys²⁶(N^ε-(ω-carboxyheptanoyl))-GLP-1(7-37)-OH,
 25 Arg^{26,34}Lys³⁸(N^ε-(ω-carboxyheptanoyl))-GLP-1(7-38)-OH,
 Arg^{26,34}Lys³⁶(N^ε-(ω-carboxyheptanoyl))-GLP-1(7-37)-OH,
 Arg^{26,34}Lys³⁶(N^ε-(ω-carboxyheptanoyl))-GLP-1(7-36)-OH,
 Lys^{26,34}bis(N^ε-(ω-carboxyheptanoyl))-GLP-1(7-37)-OH,
 Arg³⁴Lys²⁶(N^ε-(ω-carboxypentadecanoyl))-GLP-1(7-37)-OH,
 30 Arg^{26,34}Lys³⁶(N^ε-(ω-carboxyheptanoyl))-GLP-1(7-36)-OH,
 Arg³⁴Lys²⁶(N^ε-lithocholyl)-GLP-1(7-37)-OH,
 Glu^{22,23,30}Arg^{26,34}Lys³⁸(N^ε-(γ-glutamyl(N^α-tetradecanoyl)))-GLP-1(7-38)-OH,
 Glu^{23,26}Arg³⁴Lys³⁸(N^ε-(γ-glutamyl(N^α-tetradecanoyl)))-GLP-1(7-38)-OH,

- Lys^{26,34}-bis(N^ε-(ω-carboxytridecanoyl))-GLP-1(7-37)-OH,
 Lys^{26,34}-bis(N^ε-(γ-glutamyl(N^α-tetradecanoyl)))-GLP-1(7-37)-OH,
 Arg^{26,34}Lys³⁸(N^ε-(ω-carboxypentadecanoyl))-GLP-1(7-38)-OH,
 Lys^{26,34}-bis(N^ε-(γ-glutamyl(N^α-hexadecanoyl)))-GLP-1(7-37)-OH,
 5 Arg³⁴Lys²⁶(N^ε-(γ-glutamyl(N^α-hexadecanoyl)))-GLP-1(7-37)-OH,
 Arg^{26,34}Lys³⁸(N^ε-(γ-glutamyl(N^α-tetradecanoyl)))-GLP-1(7-38)-OH,
 Arg^{26,34}Lys³⁸(N^ε-(ω-carboxypentadecanoyl))-GLP-1(7-38)-OH,
 Arg^{26,34}Lys³⁸(N^ε-(γ-glutamyl(N^α-hexadecanoyl)))-GLP-1(7-38)-OH,
 Arg^{18,23,26,30,34}Lys³⁸(N^ε-hexadecanoyl)-GLP-1(7-38)-OH,
 10 Arg^{26,34}Lys³⁸(N^ε-(ω-carboxytridecanoyl))-GLP-1(7-38)-OH,
 Arg³⁴Lys²⁶(N^ε-(γ-glutamyl(N^α-tetradecanoyl)))-GLP-1(7-37)-OH,
 Arg^{26,34}Lys³⁸(N^ε-(γ-glutamyl(N^α-octadecanoyl)))-GLP-1(7-38)-OH,
 Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-37);
 Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-37);
 15 Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-37);
 Gly⁸Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-37);
 Gly⁸Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-37);
 Gly⁸Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-37);
 Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-37);
 20 Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-38);
 Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-38);
 Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-38);
 Gly⁸Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-38);
 Gly⁸Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-38);
 25 Gly⁸Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-38);
 Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-38);
 Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-39);
 Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-39);
 Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-39);
 30 Gly⁸Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-39);
 Gly⁸Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-39);
 Gly⁸Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-39);
 Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-39);

- Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-40);
Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-40);
Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-40);
Gly⁸Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-40);
5 Gly⁸Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-40);
Gly⁸Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-40);
Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-40);
Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-36);
Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-36);
10 Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-36);
Gly⁸Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-36);
Gly⁸Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-36);
Gly⁸Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-36);
Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-36);
15 Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-35);
Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-35);
Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-35);
Gly⁸Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-35);
Gly⁸Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-35);
20 Gly⁸Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-35);
Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-35);
Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-36)amide;
Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-36)amide;
Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-36)amide;
25 Gly⁸Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-36)amide;
Gly⁸Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-36)amide;
Gly⁸Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-36)amide;
Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-36)amide;
Gly⁸Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-37);
30 Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-37);
Gly⁸Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-37);
Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-37);
Gly⁸Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-37);

- Gly⁸Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-38);
 Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-38);
 Gly⁸Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-38);
 Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-38);
 5 Arg^{26,34}Lys³⁸(N^ε-tetradecanoyl)-GLP-1(7-38);
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-38);
 Gly⁸Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-39);
 Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-39);
 Gly⁸Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-39);
 10 Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-39);
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-39);
 Gly⁸Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-40);
 Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-40);
 Gly⁸Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-40);
 15 Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-40);
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-40);
 Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37);
 Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37);
 Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37);
 20 Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37);
 Gly⁸Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37);
 Gly⁸Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37);
 Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38);
 Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38);
 25 Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38);
 Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38);
 Gly⁸Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38);
 Gly⁸Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38);
 Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39);
 30 Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39);
 Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39);
 Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39);
 Gly⁸Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39);

- Gly⁸Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39);
 Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40);
 Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40);
 Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40);
 5 Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40);
 Gly⁸Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40);
 Gly⁸Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40);
 Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36);
 Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36);
 10 Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36);
 Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36);
 Gly⁸Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36);
 Gly⁸Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36);
 Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36)amide;
 15 Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36)amide;
 Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36)amide;
 Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36)amide;
 Gly⁸Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36)amide;
 Gly⁸Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36)amide;
 20 Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-35);
 Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-35);
 Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-35);
 Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-35);
 Gly⁸Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-35);
 25 Gly⁸Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-35);
 Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37);
 Gly⁸Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37);
 Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-37);
 Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-37);
 30 Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37);
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37);
 Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38);
 Gly⁸Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38);

- Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-38);
 Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-38);
 Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38);
 Arg^{26,34}Lys³⁸(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38);
 5 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38);
 Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39);
 Gly⁸Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39);
 Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-39);
 Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-39);
 10 Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39);
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39);
 Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40);
 Gly⁸Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40);
 Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-40);
 15 Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-40);
 Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40);
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40);
 Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-37);
 Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-37);
 20 Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-37);
 Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-37);
 Gly⁸Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-37);
 Gly⁸Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-37);
 Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-37);
 25 Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-38);
 Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-38);
 Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-38);
 Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-38);
 Gly⁸Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-38);
 30 Gly⁸Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-38);
 Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-38);
 Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-39);
 Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-39);

- Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-39);
Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-39);
Gly⁸Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-39);
Gly⁸Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-39);
5 Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-39);
Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-40);
Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-40);
Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-40);
Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-40);
10 Gly⁸Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-40);
Gly⁸Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-40);
Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-40);
Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-36);
Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-36);
15 Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-36);
Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-36);
Gly⁸Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-36);
Gly⁸Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-36);
Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-36);
20 Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-35);
Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-35);
Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-35);
Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-35);
Gly⁸Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-35);
25 Gly⁸Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-35);
Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-35);
Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide;
Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide;
Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide;
30 Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide;
Gly⁸Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide;
Gly⁸Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide;
Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide;

- Gly⁸Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-37);
 Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-37);
 Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-37);
 Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-37);
 5 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-37);
 Lys²⁶(N^ε-(choloyl))-GLP-1(7-37);
 Lys³⁴(N^ε-(choloyl))-GLP-1(7-37);
 Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-37);
 Gly⁸Lys²⁶(N^ε-(choloyl))-GLP-1(7-37);
 10 Gly⁸Lys³⁴(N^ε-(choloyl))-GLP-1(7-37);
 Gly⁸Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-37);
 Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-37);
 Gly⁸Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-38);
 Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-38);
 15 Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-38);
 Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-38);
 Arg^{26,34}Lys³⁸(N^ε-(7-deoxycholoyl))-GLP-1(7-38);
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-38);
 Lys²⁶(N^ε-(choloyl))-GLP-1(7-38);
 20 Lys³⁴(N^ε-(choloyl))-GLP-1(7-38);
 Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-38);
 Gly⁸Lys²⁶(N^ε-(choloyl))-GLP-1(7-38);
 Gly⁸Lys³⁴(N^ε-(choloyl))-GLP-1(7-38);
 Gly⁸Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-38);
 25 Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-38);
 Gly⁸Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-39);
 Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-39);
 Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-39);
 Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-39);
 30 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-39);
 Lys²⁶(N^ε-(choloyl))-GLP-1(7-39);
 Lys³⁴(N^ε-(choloyl))-GLP-1(7-39);
 Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-39);

- Gly⁸Lys²⁶(N^ε-(choloyl))-GLP-1(7-39);
 Gly⁸Lys³⁴(N^ε-(choloyl))-GLP-1(7-39);
 Gly⁸Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-39);
 Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-39);
 5 Gly⁸Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-40);
 Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-40);
 Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-40);
 Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-40);
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-40);
 10 Lys²⁶(N^ε-(choloyl))-GLP-1(7-40);
 Lys³⁴(N^ε-(choloyl))-GLP-1(7-40);
 Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-40);
 Gly⁸Lys²⁶(N^ε-(choloyl))-GLP-1(7-40);
 Gly⁸Lys³⁴(N^ε-(choloyl))-GLP-1(7-40);
 15 Gly⁸Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-40);
 Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-40);
 Lys²⁶(N^ε-(choloyl))-GLP-1(7-36);
 Lys³⁴(N^ε-(choloyl))-GLP-1(7-36);
 Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-36);
 20 Gly⁸Lys²⁶(N^ε-(choloyl))-GLP-1(7-36);
 Gly⁸Lys³⁴(N^ε-(choloyl))-GLP-1(7-36);
 Gly⁸Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-36);
 Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-36);
 Lys²⁶(N^ε-(choloyl))-GLP-1(7-35);
 25 Lys³⁴(N^ε-(choloyl))-GLP-1(7-35);
 Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-35);
 Gly⁸Lys²⁶(N^ε-(choloyl))-GLP-1(7-35);
 Gly⁸Lys³⁴(N^ε-(choloyl))-GLP-1(7-35);
 Gly⁸Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-35);
 30 Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-35);
 Lys²⁶(N^ε-(choloyl))-GLP-1(7-36)amide;
 Lys³⁴(N^ε-(choloyl))-GLP-1(7-36)amide;
 Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-36)amide;

- Gly⁸Lys²⁶(N^ε-(choloyl))-GLP-1(7-36)amide;
Gly⁸Lys³⁴(N^ε-(choloyl))-GLP-1(7-36)amide;
Gly⁸Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-36)amide;
Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-36)amide;
5 Gly⁸Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-37);
Arg²⁶,Lys³⁴(N^ε-(octanoyl))GLP-1(7-37)-OH;
Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-37);
Gly⁸Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-37);
Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-37);
10 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-37);
Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-37);
Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-37);
Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-37);
Gly⁸Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-37);
15 Gly⁸Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-37);
Gly⁸Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-37);
Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-37);
Gly⁸Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-38);
Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-38);
20 Gly⁸Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-38);
Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-38);
Arg^{26,34}Lys³⁸(N^ε-(choloyl))-GLP-1(7-38);
Gly⁸Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-38);
Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-38);
25 Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-38);
Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-38);
Gly⁸Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-38);
Gly⁸Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-38);
Gly⁸Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-38);
30 Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-38);
Gly⁸Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-39);
Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-39);
Gly⁸Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-39);

- Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-39);
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-39);
 Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-39);
 Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-39);
 5 Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-39);
 Gly⁸Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-39);
 Gly⁸Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-39);
 Gly⁸Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-39);
 Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-39);
 10 Gly⁸Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-40);
 Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-40);
 Gly⁸Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-40);
 Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-40);
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-40);
 15 Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-40);
 Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-40);
 Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-40);
 Gly⁸Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-40);
 Gly⁸Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-40);
 20 Gly⁸Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-40);
 Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-37);
 Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-36);
 Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-36);
 Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-36);
 25 Gly⁸Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-36);
 Gly⁸Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-36);
 Gly⁸Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-36);
 Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-36);
 Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-35);
 30 Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-35);
 Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-35);
 Gly⁸Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-35);
 Gly⁸Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-35);

- Gly⁸Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-35);
 Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-35);
 Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-36)amide;
 Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-36)amide;
 5 Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-36)amide;
 Gly⁸Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-36)amide;
 Gly⁸Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-36)amide;
 Gly⁸Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-36)amide;
 Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-36)amide;
 10 Gly⁸Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-37);
 Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-37);
 Gly⁸Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-37);
 Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-37);
 Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-37);
 15 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-37);
 Gly⁸Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-38);
 Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-38);
 Gly⁸Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-38);
 Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-38);
 20 Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-38);
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-38);
 Gly⁸Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-39);
 Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-39);
 Gly⁸Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-39);
 25 Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-39);
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-39);
 Gly⁸Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-40);
 Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-40);
 Gly⁸Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-40);
 30 Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-40) and
 Gly⁸Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-40).

Other Derivatives

The derivatives of GLP-1 analogues of the present invention may be in the form one or more of (a) a C-1-6-ester, (b) an amide, C-1-6-alkylamide, or C-1-6-dialkylamide, and (c) a pharmaceutical salt. In a preferred embodiment, the derivatives of GLP-1 analogues are in the form of an acid addition salt or a carboxylate salt, most preferably in the form of an acid addition salt.

Preferred Derivatives of GLP-1 Analogues of the Present Invention

In a further preferred embodiment, a parent peptide for a derivative of the invention is Arg²⁶-GLP-1(7-37); Arg³⁴-GLP-1(7-37); Lys³⁶-GLP-1(7-37); Arg^{26,34}Lys³⁶-GLP-1(7-37); Arg^{26,34}Lys³⁸GLP-1(7-38); Arg^{26,34}Lys³⁹-GLP-1(7-39); Arg^{26,34}Lys⁴⁰-GLP-1(7-40); Arg²⁶Lys³⁶-GLP-1(7-37); Arg³⁴Lys³⁶-GLP-1(7-37); Arg²⁶Lys³⁹-GLP-1(7-39); Arg³⁴Lys⁴⁰-GLP-1(7-40); Arg^{26,34}Lys^{36,39}-GLP-1(7-39); Arg^{26,34}Lys^{36,40}-GLP-1(7-40); Gly⁸Arg²⁶-GLP-1(7-37); Gly⁸Arg³⁴-GLP-1(7-37); Gly⁸Lys³⁶-GLP-1(7-37); Gly⁸Arg^{26,34}Lys³⁶-GLP-1(7-37); Gly⁸Arg^{26,34}Lys³⁹-GLP-1(7-39); Gly⁸Arg^{26,34}Lys⁴⁰-GLP-1(7-40); Gly⁸Arg²⁶Lys³⁶-GLP-1(7-37); Gly⁸Arg³⁴Lys³⁶-GLP-1(7-37); Gly⁸Arg²⁶Lys³⁹-GLP-1(7-39); Gly⁸Arg³⁴Lys⁴⁰-GLP-1(7-40); Gly⁸Arg^{26,34}Lys^{36,39}-GLP-1(7-39); or Gly⁸Arg^{26,34}Lys^{36,40}-GLP-1(7-40).

In a further preferred embodiment, a parent peptide for a derivative of the invention is:

Arg^{26,34}Lys³⁸GLP-1(7-38);
 Arg^{26,34}Lys³⁹GLP-1(7-39);
 Arg^{26,34}Lys⁴⁰GLP-1(7-40);
 Arg^{26,34}Lys⁴¹GLP-1(7-41);
 Arg^{26,34}Lys⁴²GLP-1(7-42);
 Arg^{26,34}Lys⁴³GLP-1(7-43);
 Arg^{26,34}Lys⁴⁴GLP-1(7-44);
 Arg^{26,34}Lys⁴⁵GLP-1(7-45);
 Arg²⁶Lys³⁸GLP-1(7-38);
 Arg³⁴Lys³⁸GLP-1(7-38);
 Arg^{26,34}Lys^{36,38}GLP-1(7-38);
 Arg^{26,34}Lys³⁸GLP-1(7-38);
 Arg²⁶Lys³⁹GLP-1(1-39);
 Arg³⁴Lys³⁹GLP-1(1-39);
 Arg^{26,34}Lys^{36,39}GLP-1(1-39);
 Arg²⁶Lys³⁹GLP-1(7-39);
 Arg³⁴Lys³⁹GLP-1(7-39);

Arg^{26,34}Lys^{36,39}GLP-1(7-39);

In a further preferred embodiment, the present invention relates to a GLP-1 derivative wherein the parent peptide is selected from the group comprising Arg²⁶-GLP-1(7-37), Arg³⁴-GLP-1(7-37), Lys³⁶-GLP-1(7-37), Arg^{26,34}Lys³⁶-GLP-1(7-37), Arg²⁶Lys³⁶-GLP-1(7-37),
 5 Arg³⁴Lys³⁶-GLP-1(7-37), Gly⁸Arg²⁶-GLP-1(7-37), Gly⁸Arg³⁴-GLP-1(7-37), Gly⁸Lys³⁶-GLP-1(7-37), Gly⁸Arg^{26,34}Lys³⁶-GLP-1(7-37), Gly⁸Arg²⁶Lys³⁶-GLP-1(7-37) and Gly⁸Arg³⁴Lys³⁶-GLP-1(7-37).

In a further preferred embodiment, the present invention relates to a GLP-1 derivative wherein the parent peptide is selected from the group comprising Arg²⁶Lys³⁸-GLP-1(7-38),
 10 Arg^{26,34}Lys³⁸-GLP-1(7-38), Arg^{26,34}Lys^{36,38}-GLP-1(7-38), Gly⁸Arg²⁶Lys³⁸-GLP-1(7-38) and Gly⁸Arg^{26,34}Lys^{36,38}-GLP-1(7-38).

In a further preferred embodiment, the present invention relates to a GLP-1 derivative wherein the parent peptide is selected from the group comprising Arg²⁶Lys³⁹-GLP-1(7-39), Arg^{26,34}Lys^{36,39}-GLP-1(7-39), Gly⁸Arg²⁶Lys³⁹-GLP-1(7-39) and Gly⁸Arg^{26,34}Lys^{36,39}-GLP-1(7-39).

15 In a further preferred embodiment, the present invention relates to a GLP-1 derivative wherein the parent peptide is selected from the group comprising Arg³⁴Lys⁴⁰-GLP-1(7-40), Arg^{26,34}Lys^{36,40}-GLP-1(7-40), Gly⁸Arg³⁴Lys⁴⁰-GLP-1(7-40) and Gly⁸Arg^{26,34}Lys^{36,40}-GLP-1(7-40).

In a further preferred embodiment, the present invention relates to a GLP-1 derivative wherein the parent peptide is:

20 Arg²⁶-GLP-1(7-36); Arg³⁴-GLP-1(7-36); Arg^{26,34}Lys³⁶-GLP-1(7-36); Arg²⁶-GLP-1(7-36)amide; Arg³⁴-GLP-1(7-36)amide; Arg^{26,34}Lys³⁶-GLP-1(7-36)amide; Arg²⁶-GLP-1(7-37); Arg³⁴-GLP-1(7-37); Arg^{26,34}Lys³⁶-GLP-1(7-37); Arg²⁶-GLP-1(7-38); Arg³⁴-GLP-1(7-38) ; Arg^{26,34}Lys³⁸GLP-1(7-38); Arg²⁶-GLP-1(7-39); Arg³⁴-GLP-1(7-39); Arg^{26,34}Lys³⁹-GLP-1(7-39);
 Gly⁸Arg²⁶-GLP-1(7-36); Gly⁸Arg³⁴-GLP-1(7-36); Gly⁸Arg^{26,34}Lys³⁶-GLP-1(7-36); Gly⁸Arg²⁶-GLP-1(7-36)amide; Gly⁸Arg³⁴-GLP-1(7-36)amide; Gly⁸Arg^{26,34}Lys³⁶-GLP-1(7-36)amide; Gly⁸Arg²⁶-GLP-1(7-37); Gly⁸Arg³⁴-GLP-1(7-37); Gly⁸Arg^{26,34}Lys³⁶-GLP-1(7-37); Gly⁸Arg²⁶-GLP-1(7-38); Gly⁸Arg³⁴-GLP-1(7-38) ; Gly⁸Arg^{26,34}Lys³⁶GLP-1(7-38); Gly⁸Arg²⁶-GLP-1(7-39); Gly⁸Arg³⁴-GLP-1(7-39); Gly⁸Arg^{26,34}Lys³⁹-GLP-1(7-39);
 25 Val⁸Arg²⁶-GLP-1(7-36); Val⁸Arg³⁴-GLP-1(7-36); Val⁸Arg^{26,34}Lys³⁶-GLP-1(7-36); Val⁸Arg²⁶-GLP-1(7-36)amide; Val⁸Arg³⁴-GLP-1(7-36)amide; Val⁸Arg^{26,34}Lys³⁶-GLP-1(7-36)amide; Val⁸Arg²⁶-GLP-1(7-37); Val⁸Arg³⁴-GLP-1(7-37); Val⁸Arg^{26,34}Lys³⁶-GLP-1(7-37); Val⁸Arg²⁶-GLP-1(7-38); Val⁸Arg³⁴-GLP-1(7-38); Val⁸Arg^{26,34}Lys³⁸GLP-1(7-38); Val⁸Arg²⁶-GLP-1(7-39); Val⁸Arg³⁴-GLP-1(7-39); Val⁸Arg^{26,34}Lys³⁹-GLP-1(7-39);

Ser⁸Arg²⁶-GLP-1(7-36); Ser⁸Arg³⁴-GLP-1(7-36); Ser⁸Arg^{26,34}Lys³⁶-GLP-1(7-36); Ser⁸Arg²⁶-GLP-
 1(7-36)amide; Ser⁸Arg³⁴-GLP-1(7-36)amide; Ser⁸Arg^{26,34}Lys³⁶-GLP-1(7-36)amide; Ser⁸Arg²⁶-
 GLP-1(7-37); Ser⁸Arg³⁴-GLP-1(7-37); Ser⁸Arg^{26,34}Lys³⁶-GLP-1(7-37); Ser⁸Arg²⁶-GLP-1(7-38);
 Ser⁸Arg³⁴-GLP-1(7-38) ; Ser⁸Arg^{26,34}Lys³⁸GLP-1(7-38); Ser⁸Arg²⁶-GLP-1(7-39); Ser⁸Arg³⁴-GLP-
 5 1(7-39); Ser⁸Arg^{26,34}Lys³⁹-GLP-1(7-39);
 Thr⁸Arg²⁶-GLP-1(7-36); Thr⁸Arg³⁴-GLP-1(7-36); Thr⁸Arg^{26,34}Lys³⁶-GLP-1(7-36); Thr⁸Arg²⁶-GLP-
 1(7-36)amide; Thr⁸Arg³⁴-GLP-1(7-36)amide; Thr⁸Arg^{26,34}Lys³⁶-GLP-1(7-36)amide; Thr⁸Arg²⁶-
 GLP-1(7-37); Thr⁸Arg³⁴-GLP-1(7-37); Thr⁸Arg^{26,34}Lys³⁶-GLP-1(7-37); Thr⁸Arg²⁶-GLP-1(7-38);
 Thr⁸Arg³⁴-GLP-1(7-38) ; Thr⁸Arg^{26,34}Lys³⁸GLP-1(7-38); Thr⁸Arg²⁶-GLP-1(7-39); Thr⁸Arg³⁴-GLP-
 10 1(7-39); Thr⁸Arg^{26,34}Lys³⁹-GLP-1(7-39);
 Val⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Val⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Val⁸Glu³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Val⁸Glu³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Val⁸Glu³⁸Arg^{26,34}Lys³⁹-
 GLP-1(7-39); Val⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Val⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Val⁸Glu³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Val⁸Glu³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Val⁸Glu³⁸Arg^{26,34}Lys³⁹-
 15 GLP-1(7-39);
 Val⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Val⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Val⁸Asp³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Val⁸Asp³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Val⁸Asp³⁸Arg^{26,34}Lys³⁹-
 GLP-1(7-39); Val⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Val⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Val⁸Asp³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Val⁸Asp³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Val⁸Asp³⁸Arg^{26,34}Lys³⁹-
 20 GLP-1(7-39);
 Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Ser⁸Glu³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Ser⁸Glu³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Ser⁸Glu³⁸Arg^{26,34}Lys³⁹-
 GLP-1(7-39); Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Ser⁸Glu³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Ser⁸Glu³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Ser⁸Glu³⁸Arg^{26,34}Lys³⁹-
 25 GLP-1(7-39);
 Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Ser⁸Asp³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Ser⁸Asp³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Ser⁸Asp³⁸Arg^{26,34}Lys³⁹-
 GLP-1(7-39); Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Ser⁸Asp³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Ser⁸Asp³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Ser⁸Asp³⁸Arg^{26,34}Lys³⁹-
 30 GLP-1(7-39);
 Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Thr⁸Glu³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Thr⁸Glu³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Thr⁸Glu³⁸Arg^{26,34}Lys³⁹-
 GLP-1(7-39); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;

Thr⁸Glu³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Thr⁸Glu³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Thr⁸Glu³⁸Arg^{26,34}Lys³⁹-
 GLP-1(7-39);
 Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Thr⁸Asp³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Thr⁸Asp³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Thr⁸Asp³⁸Arg^{26,34}Lys³⁹-
 5 GLP-1(7-39); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Thr⁸Asp³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Thr⁸Asp³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Thr⁸Asp³⁸Arg^{26,34}Lys³⁹-
 GLP-1(7-39);
 Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Gly⁸Glu³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Gly⁸Glu³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Gly⁸Glu³⁸Arg^{26,34}Lys³⁹-
 10 GLP-1(7-39); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Gly⁸Glu³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Gly⁸Glu³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Gly⁸Glu³⁸Arg^{26,34}Lys³⁹-
 GLP-1(7-39);
 Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Gly⁸Asp³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Gly⁸Asp³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Gly⁸Asp³⁸Arg^{26,34}Lys³⁹-
 15 GLP-1(7-39); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-GLP-1(7-36)amide;
 Gly⁸Asp³⁶Arg^{26,34}Lys³⁷GLP-1(7-37); Gly⁸Asp³⁷Arg^{26,34}Lys³⁸GLP-1(7-38); Gly⁸Asp³⁸Arg^{26,34}Lys³⁹-
 GLP-1(7-39);
 Arg^{26,34}Lys¹⁸-GLP-1(7-36); Arg^{26,34}Lys¹⁸-GLP-1(7-36)amide; Arg^{26,34}Lys¹⁸GLP-1(7-37);
 Arg^{26,34}Lys¹⁸GLP-1(7-38); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-GLP-1(7-
 20 36); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-GLP-1(7-36)amide;
 Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸GLP-1(7-38);
 Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸GLP-1(7-38);
 Arg^{26,34}Lys²³-GLP-1(7-36); Arg^{26,34}Lys²³-GLP-1(7-36)amide; Arg^{26,34}Lys²³GLP-1(7-37);
 Arg^{26,34}Lys²³GLP-1(7-38); Gly⁸Asp²⁴Arg^{26,34}Lys²³-GLP-1(7-36); Gly⁸Asp²²Arg^{26,34}Lys²³-GLP-1(7-
 25 36); Gly⁸Asp²⁴Arg^{26,34}Lys²³-GLP-1(7-36)amide; Gly⁸Asp²²Arg^{26,34}Lys²³-GLP-1(7-36)amide;
 Gly⁸Asp²⁴Arg^{26,34}Lys²³GLP-1(7-37); Gly⁸Asp²⁴Arg^{26,34}Lys²³GLP-1(7-38);
 Gly⁸Asp²²Arg^{26,34}Lys²³GLP-1(7-38);
 Arg^{26,34}Lys²⁷-GLP-1(7-36); Arg^{26,34}Lys²⁷-GLP-1(7-36)amide; Arg^{26,34}Lys²⁷GLP-1(7-37);
 Arg^{26,34}Lys²⁷GLP-1(7-38); Gly⁸Asp²⁸Arg^{26,34}Lys²⁷-GLP-1(7-36); Gly⁸Asp²⁶Arg^{26,34}Lys²⁷-GLP-1(7-
 30 36); Gly⁸Asp²⁸Arg^{26,34}Lys²⁷-GLP-1(7-36)amide; Gly⁸Asp²⁶Arg^{26,34}Lys²⁷-GLP-1(7-36)amide;
 Gly⁸Asp²⁸Arg^{26,34}Lys²⁷GLP-1(7-37); Gly⁸Asp²⁸Arg^{26,34}Lys²⁷GLP-1(7-38);
 Gly⁸Asp²⁶Arg^{26,34}Lys²⁷GLP-1(7-38);
 Arg^{26,34}Lys¹⁸-GLP-1(7-36); Arg^{26,34}Lys¹⁸-GLP-1(7-36)amide; Arg^{26,34}Lys¹⁸GLP-1(7-37);
 Arg^{26,34}Lys¹⁸GLP-1(7-38); Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-GLP-1(7-36); Val⁸Asp¹⁷Arg^{26,34}Lys¹⁸-GLP-1(7-

- 36); Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-GLP-1(7-36)amide; Val⁸Asp¹⁷Arg^{26,34}Lys¹⁸-GLP-1(7-36)amide;
 Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸GLP-1(7-37); Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸GLP-1(7-38);
 Val⁸Asp¹⁷Arg^{26,34}Lys¹⁸GLP-1(7-38);
 Arg^{26,34}Lys²³-GLP-1(7-36); Arg^{26,34}Lys²³-GLP-1(7-36)amide; Arg^{26,34}Lys²³GLP-1(7-37);
 5 Arg^{26,34}Lys²³GLP-1(7-38); Val⁸Asp²⁴Arg^{26,34}Lys²³-GLP-1(7-36); Val⁸Asp²²Arg^{26,34}Lys²³-GLP-1(7-36);
 36); Val⁸Asp²⁴Arg^{26,34}Lys²³-GLP-1(7-36)amide; Val⁸Asp²²Arg^{26,34}Lys²³-GLP-1(7-36)amide;
 Val⁸Asp²⁴Arg^{26,34}Lys²³GLP-1(7-37); Val⁸Asp²⁴Arg^{26,34}Lys²³GLP-1(7-38);
 Val⁸Asp²²Arg^{26,34}Lys²³GLP-1(7-38);
 Arg^{26,34}Lys²⁷-GLP-1(7-36); Arg^{26,34}Lys²⁷-GLP-1(7-36)amide; Arg^{26,34}Lys²⁷GLP-1(7-37);
 10 Arg^{26,34}Lys²⁷GLP-1(7-38); Val⁸Asp²⁸Arg^{26,34}Lys²⁷-GLP-1(7-36); Val⁸Asp²⁶Arg^{26,34}Lys²⁷-GLP-1(7-36);
 36); Val⁸Asp²⁸Arg^{26,34}Lys²⁷-GLP-1(7-36)amide; Val⁸Asp²⁶Arg^{26,34}Lys²⁷-GLP-1(7-36)amide;
 Val⁸Asp²⁸Arg^{26,34}Lys²⁷GLP-1(7-37); Val⁸Asp²⁸Arg^{26,34}Lys²⁷GLP-1(7-38);
 Val⁸Asp²⁶Arg^{26,34}Lys²⁷GLP-1(7-38);
 Arg^{26,34}Lys¹⁸-GLP-1(7-36); Arg^{26,34}Lys¹⁸-GLP-1(7-36)amide; Arg^{26,34}Lys¹⁸GLP-1(7-37);
 15 Arg^{26,34}Lys¹⁸GLP-1(7-38); Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-GLP-1(7-36); Ser⁸Asp¹⁷Arg^{26,34}Lys¹⁸-GLP-1(7-36);
 36); Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-GLP-1(7-36)amide; Ser⁸Asp¹⁷Arg^{26,34}Lys¹⁸-GLP-1(7-36)amide;
 Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸GLP-1(7-37); Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸GLP-1(7-38);
 Ser⁸Asp¹⁷Arg^{26,34}Lys¹⁸GLP-1(7-38);
 Arg^{26,34}Lys²³-GLP-1(7-36); Arg^{26,34}Lys²³-GLP-1(7-36)amide; Arg^{26,34}Lys²³GLP-1(7-37);
 20 Arg^{26,34}Lys²³GLP-1(7-38); Ser⁸Asp²⁴Arg^{26,34}Lys²³-GLP-1(7-36); Ser⁸Asp²²Arg^{26,34}Lys²³-GLP-1(7-36);
 36); Ser⁸Asp²⁴Arg^{26,34}Lys²³-GLP-1(7-36)amide; Ser⁸Asp²²Arg^{26,34}Lys²³-GLP-1(7-36)amide;
 Ser⁸Asp²⁴Arg^{26,34}Lys²³GLP-1(7-37); Ser⁸Asp²⁴Arg^{26,34}Lys²³GLP-1(7-38);
 Ser⁸Asp²²Arg^{26,34}Lys²³GLP-1(7-38);
 Arg^{26,34}Lys²⁷-GLP-1(7-36); Arg^{26,34}Lys²⁷-GLP-1(7-36)amide; Arg^{26,34}Lys²⁷GLP-1(7-37);
 25 Arg^{26,34}Lys²⁷GLP-1(7-38); Ser⁸Asp²⁸Arg^{26,34}Lys²⁷-GLP-1(7-36); Ser⁸Asp²⁶Arg^{26,34}Lys²⁷-GLP-1(7-36);
 36); Ser⁸Asp²⁸Arg^{26,34}Lys²⁷-GLP-1(7-36)amide; Ser⁸Asp²⁶Arg^{26,34}Lys²⁷-GLP-1(7-36)amide;
 Ser⁸Asp²⁸Arg^{26,34}Lys²⁷GLP-1(7-37); Ser⁸Asp²⁸Arg^{26,34}Lys²⁷GLP-1(7-38);
 Ser⁸Asp²⁶Arg^{26,34}Lys²⁷GLP-1(7-38);
 Arg^{26,34}Lys¹⁸-GLP-1(7-36); Arg^{26,34}Lys¹⁸-GLP-1(7-36)amide; Arg^{26,34}Lys¹⁸GLP-1(7-37);
 30 Arg^{26,34}Lys¹⁸GLP-1(7-38); Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-GLP-1(7-36); Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-GLP-1(7-36);
 36); Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-GLP-1(7-36)amide; Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-GLP-1(7-36)amide;
 Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸GLP-1(7-37); Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸GLP-1(7-38);
 Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸GLP-1(7-38);

- Arg^{26,34}Lys²³-GLP-1(7-36); Arg^{26,34}Lys²³-GLP-1(7-36)amide; Arg^{26,34}Lys²³GLP-1(7-37);
 Arg^{26,34}Lys²³GLP-1(7-38); Thr⁸Asp²⁴Arg^{26,34}Lys²³-GLP-1(7-36); Thr⁸Asp²²Arg^{26,34}Lys²³-GLP-1(7-
 36); Thr⁸Asp²⁴Arg^{26,34}Lys²³-GLP-1(7-36)amide; Thr⁸Asp²²Arg^{26,34}Lys²³-GLP-1(7-36)amide;
 Thr⁸Asp²⁴Arg^{26,34}Lys²³GLP-1(7-37); Thr⁸Asp²⁴Arg^{26,34}Lys²³GLP-1(7-38);
 5 Thr⁸Asp²²Arg^{26,34}Lys²³GLP-1(7-38);
 Arg^{26,34}Lys²⁷-GLP-1(7-36); Arg^{26,34}Lys²⁷-GLP-1(7-36)amide; Arg^{26,34}Lys²⁷GLP-1(7-37);
 Arg^{26,34}Lys²⁷GLP-1(7-38); Thr⁸Asp²⁸Arg^{26,34}Lys²⁷-GLP-1(7-36); Thr⁸Asp²⁶Arg^{26,34}Lys²⁷-GLP-1(7-
 36); Thr⁸Asp²⁸Arg^{26,34}Lys²⁷-GLP-1(7-36)amide; Thr⁸Asp²⁶Arg^{26,34}Lys²⁷-GLP-1(7-36)amide;
 Thr⁸Asp²⁸Arg^{26,34}Lys²⁷GLP-1(7-37); Thr⁸Asp²⁸Arg^{26,34}Lys²⁷GLP-1(7-38);
 10 Thr⁸Asp²⁶Arg^{26,34}Lys²⁷GLP-1(7-38).

In a further preferred embodiment, the present invention relates to a GLP-1 derivative wherein the parent peptide is:

- Arg²⁶Lys³⁶-GLP-1(7-36); Arg³⁴Lys³⁶-GLP-1(7-36); Arg²⁶Lys³⁶-GLP-1(7-37); Arg³⁴Lys³⁶-GLP-1(7-
 37); Arg²⁶Lys³⁷-GLP-1(7-37); Arg³⁴Lys³⁷-GLP-1(7-37); Arg²⁶Lys³⁹-GLP-1(7-39); Arg³⁴Lys³⁹-GLP-
 15 1(7-39); Arg^{26,34}Lys^{36,39}-GLP-1(7-39);
 Arg²⁶Lys¹⁸-GLP-1(7-36); Arg³⁴Lys¹⁸-GLP-1(7-36); Arg²⁶Lys¹⁸GLP-1(7-37); Arg³⁴Lys¹⁸GLP-1(7-
 37); Arg²⁶Lys¹⁸GLP-1(7-38); Arg³⁴Lys¹⁸GLP-1(7-38); Arg²⁶Lys¹⁸GLP-1(7-39); Arg³⁴Lys¹⁸GLP-
 1(7-39);
 Arg²⁶Lys²³-GLP-1(7-36); Arg³⁴Lys²³-GLP-1(7-36); Arg²⁶Lys²³GLP-1(7-37); Arg³⁴Lys²³GLP-1(7-
 20 37); Arg²⁶Lys²³GLP-1(7-38); Arg³⁴Lys²³GLP-1(7-38); Arg²⁶Lys²³GLP-1(7-39); Arg³⁴Lys²³GLP-
 1(7-39);
 Arg²⁶Lys²⁷-GLP-1(7-36); Arg³⁴Lys²⁷-GLP-1(7-36); Arg²⁶Lys²⁷GLP-1(7-37); Arg³⁴Lys²⁷GLP-1(7-
 37); Arg²⁶Lys²⁷GLP-1(7-38); Arg³⁴Lys²⁷GLP-1(7-38); Arg²⁶Lys²⁷GLP-1(7-39); Arg³⁴Lys²⁷GLP-
 1(7-39);
 25 Arg^{26,34}Lys^{18,36}-GLP-1(7-36); Arg^{26,34}Lys¹⁸GLP-1(7-37); Arg^{26,34}Lys^{18,37}GLP-1(7-37);
 Arg^{26,34}Lys^{18,38}GLP-1(7-38); Arg^{26,34}Lys^{18,39}GLP-1(7-39); Arg^{26,34}Lys^{23,36}-GLP-1(7-36);
 Arg^{26,34}Lys²³GLP-1(7-37); Arg^{26,34}Lys^{23,37}GLP-1(7-37); Arg^{26,34}Lys^{23,38}GLP-1(7-38);
 Arg^{26,34}Lys^{23,39}GLP-1(7-39); Arg^{26,34}Lys^{27,36}-GLP-1(7-36); Arg^{26,34}Lys²⁷GLP-1(7-37);
 Arg^{26,34}Lys^{27,37}GLP-1(7-37); Arg^{26,34}Lys^{27,38}GLP-1(7-38); Arg^{26,34}Lys^{27,39}GLP-1(7-39);
 30 Gly⁸GLP-1(7-36); Gly⁸GLP-1(7-37); Gly⁸GLP-1(7-38); Gly⁸GLP-1(7-39)
 Gly⁸Arg²⁶Lys³⁶-GLP-1(7-36); Gly⁸Arg³⁴Lys³⁶-GLP-1(7-36); Gly⁸Arg²⁶Lys³⁶-GLP-1(7-37);
 Gly⁸Arg³⁴Lys³⁶-GLP-1(7-37); Gly⁸Arg²⁶Lys³⁷-GLP-1(7-37); Gly⁸Arg³⁴Lys³⁷-GLP-1(7-37);
 Gly⁸Arg²⁶Lys³⁹-GLP-1(7-39); Gly⁸Arg³⁴Lys³⁹-GLP-1(7-39); Gly⁸Arg^{26,34}Lys^{36,39}-GLP-1(7-39);

- Gly⁸Arg²⁶Lys¹⁸-GLP-1(7-36); Gly⁸Arg³⁴Lys¹⁸-GLP-1(7-36); Gly⁸Arg²⁶Lys¹⁸GLP-1(7-37);
 Gly⁸Arg³⁴Lys¹⁸GLP-1(7-37); Gly⁸Arg²⁶Lys¹⁸GLP-1(7-38); Gly⁸Arg³⁴Lys¹⁸GLP-1(7-38);
 Gly⁸Arg²⁶Lys¹⁸GLP-1(7-39); Gly⁸Arg³⁴Lys¹⁸GLP-1(7-39);
 Gly⁸Arg²⁶Lys²³-GLP-1(7-36); Gly⁸Arg³⁴Lys²³-GLP-1(7-36); Gly⁸Arg²⁶Lys²³GLP-1(7-37);
 5 Gly⁸Arg³⁴Lys²³GLP-1(7-37); Gly⁸Arg²⁶Lys²³GLP-1(7-38); Gly⁸Arg³⁴Lys²³GLP-1(7-38);
 Gly⁸Arg²⁶Lys²³GLP-1(7-39); Gly⁸Arg³⁴Lys²³GLP-1(7-39);
 Gly⁸Arg²⁶Lys²⁷-GLP-1(7-36); Gly⁸Arg³⁴Lys²⁷-GLP-1(7-36); Gly⁸Arg²⁶Lys²⁷GLP-1(7-37);
 Gly⁸Arg³⁴Lys²⁷GLP-1(7-37); Gly⁸Arg²⁶Lys²⁷GLP-1(7-38); Gly⁸Arg³⁴Lys²⁷GLP-1(7-38);
 Gly⁸Arg²⁶Lys²⁷GLP-1(7-39); Gly⁸Arg³⁴Lys²⁷GLP-1(7-39);
 10 Gly⁸Arg^{26,34}Lys^{18,36}-GLP-1(7-36); Gly⁸Arg^{26,34}Lys¹⁸GLP-1(7-37); Gly⁸Arg^{26,34}Lys^{18,37}GLP-1(7-37);
 Gly⁸Arg^{26,34}Lys^{18,38}GLP-1(7-38); Gly⁸Arg^{26,34}Lys^{18,39}GLP-1(7-39); Gly⁸Arg^{26,34}Lys^{23,36}-GLP-1(7-36);
 Gly⁸Arg^{26,34}Lys²³GLP-1(7-37); Gly⁸Arg^{26,34}Lys^{23,37}GLP-1(7-37); Gly⁸Arg^{26,34}Lys^{23,38}GLP-1(7-38);
 Gly⁸Arg^{26,34}Lys^{23,39}GLP-1(7-39); Gly⁸Arg^{26,34}Lys^{27,36}-GLP-1(7-36); Gly⁸Arg^{26,34}Lys²⁷GLP-1(7-37);
 Gly⁸Arg^{26,34}Lys^{27,37}GLP-1(7-37); Gly⁸Arg^{26,34}Lys^{27,38}GLP-1(7-38); Gly⁸Arg^{26,34}Lys^{27,39}GLP-1(7-39);
 15 Val⁸GLP-1(7-36); Val⁸GLP-1(7-37); Val⁸GLP-1(7-38); Val⁸GLP-1(7-39)
 Val⁸Arg²⁶Lys³⁶-GLP-1(7-36); Val⁸Arg³⁴Lys³⁶-GLP-1(7-36); Val⁸Arg²⁶Lys³⁶-GLP-1(7-37);
 Val⁸Arg³⁴Lys³⁶-GLP-1(7-37); Val⁸Arg²⁶Lys³⁷-GLP-1(7-37); Val⁸Arg³⁴Lys³⁷-GLP-1(7-37);
 Val⁸Arg²⁶Lys³⁹-GLP-1(7-39); Val⁸Arg³⁴Lys³⁹-GLP-1(7-39); Val⁸Arg^{26,34}Lys^{36,39}-GLP-1(7-39);
 Val⁸Arg²⁶Lys¹⁸-GLP-1(7-36); Val⁸Arg³⁴Lys¹⁸-GLP-1(7-36); Val⁸Arg²⁶Lys¹⁸GLP-1(7-37);
 20 Val⁸Arg³⁴Lys¹⁸GLP-1(7-37); Val⁸Arg²⁶Lys¹⁸GLP-1(7-38); Val⁸Arg³⁴Lys¹⁸GLP-1(7-38);
 Val⁸Arg²⁶Lys¹⁸GLP-1(7-39); Val⁸Arg³⁴Lys¹⁸GLP-1(7-39);
 Val⁸Arg²⁶Lys²³-GLP-1(7-36); Val⁸Arg³⁴Lys²³-GLP-1(7-36); Val⁸Arg²⁶Lys²³GLP-1(7-37);
 Val⁸Arg³⁴Lys²³GLP-1(7-37); Val⁸Arg²⁶Lys²³GLP-1(7-38); Val⁸Arg³⁴Lys²³GLP-1(7-38);
 Val⁸Arg²⁶Lys²³GLP-1(7-39); Val⁸Arg³⁴Lys²³GLP-1(7-39);
 25 Val⁸Arg²⁶Lys²⁷-GLP-1(7-36); Val⁸Arg³⁴Lys²⁷-GLP-1(7-36); Val⁸Arg²⁶Lys²⁷GLP-1(7-37);
 Val⁸Arg³⁴Lys²⁷GLP-1(7-37); Val⁸Arg²⁶Lys²⁷GLP-1(7-38); Val⁸Arg³⁴Lys²⁷GLP-1(7-38);
 Val⁸Arg²⁶Lys²⁷GLP-1(7-39); Val⁸Arg³⁴Lys²⁷GLP-1(7-39);
 Val⁸Arg^{26,34}Lys^{18,36}-GLP-1(7-36); Val⁸Arg^{26,34}Lys¹⁸GLP-1(7-37); Val⁸Arg^{26,34}Lys^{18,37}GLP-1(7-37);
 Val⁸Arg^{26,34}Lys^{18,38}GLP-1(7-38); Val⁸Arg^{26,34}Lys^{18,39}GLP-1(7-39); Val⁸Arg^{26,34}Lys^{23,36}-GLP-1(7-36);
 30 Val⁸Arg^{26,34}Lys²³GLP-1(7-37); Val⁸Arg^{26,34}Lys^{23,37}GLP-1(7-37); Val⁸Arg^{26,34}Lys^{23,38}GLP-1(7-38);
 Val⁸Arg^{26,34}Lys^{23,39}GLP-1(7-39); Val⁸Arg^{26,34}Lys^{27,36}-GLP-1(7-36); Val⁸Arg^{26,34}Lys²⁷GLP-1(7-37);
 Val⁸Arg^{26,34}Lys^{27,37}GLP-1(7-37); Val⁸Arg^{26,34}Lys^{27,38}GLP-1(7-38); Val⁸Arg^{26,34}Lys^{27,39}GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-37).

5 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-37).

10 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-38).

15 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-38).

20 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-38).

25 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-39).

30 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-39).

5 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-40).

10 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-40).

15 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-40).

20 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-36).

25 In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-36).

30 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-36)amide.

5 In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-tetradecanoyl)-GLP-1(7-36)amide.

10 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-tetradecanoyl)-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-36)amide.

15 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-37).

20 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-37).

25 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-38).

30 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁸(N^ε-tetradecanoyl)-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-39).

5 In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-39);

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-39).

10 In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-tetradecanoyl)-GLP-1(7-40).

15 In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-tetradecanoyl)Arg³⁴-GLP-1(7-40).

20 In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-tetradecanoyl)-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37).

25 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37).

30 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38).

5 In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38).

10 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39).

15 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39).

20 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39).

25 In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40).

30 In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36).

5 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36).

10 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36).

15 In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36)amide.

20 In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36)amide.

25 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37).

30 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-37).

5 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38).

10 In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38).

15 In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁸(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-38).

20 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-39).

25 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39).

30 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(ω-carboxynonadecanoyl))Arg³⁴-GLP-1(7-40).

5 In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(ω-carboxynonadecanoyl))-GLP-1(7-40).

10 In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-37).

15 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-37).

20 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-38).

25 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-38).

30 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-39).

5 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-39).

10 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-39).

15 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-40).

20 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-40).

25 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-40).

30 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-36).

5 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-36).

10 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide.

15 In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide.

20 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-36)amide.

25 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-37).

30 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(choloyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(choloyl))-GLP-1(7-37).

5 In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(choloyl))-GLP-1(7-37).

10 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(choloyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-37).

15 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-38).

20 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁸(N^ε-(7-deoxycholoyl))-GLP-1(7-38).

25 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(choloyl))-GLP-1(7-38).

30 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(choloyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(choloyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(choloyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-38).

5 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-39).

10 In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-39).

15 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(choloyl))-GLP-1(7-39).

20 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(choloyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(choloyl))-GLP-1(7-39).

25 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(choloyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-39).

30 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(7-deoxycholoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(7-deoxycholoyl))Arg³⁴-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-40).

5 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(7-deoxycholoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(choloyl))-GLP-1(7-40).

10 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(choloyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(choloyl))-GLP-1(7-40).

15 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(choloyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-40).

20 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(choloyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(choloyl))-GLP-1(7-36).

25 In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(choloyl))-GLP-1(7-36).

30 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(choloyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(choloyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(choloyl))-GLP-1(7-36)amide.

5 In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(choloyl))-GLP-1(7-36)amide.

10 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(choloyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(choloyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-36)amide.

15 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-37).

20 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-37).

25 In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-37).

30 In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-37).

5 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-38).

10 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁸(N^ε-(choloyl))-GLP-1(7-38).

15 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-38).

20 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-38),

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-38),

25 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-38),

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-38),

30 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-38),

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-39),

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-39),

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-39),

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-39),

5 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-39),

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-39),

10 In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-39),

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-39),

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-39),

15 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-39),

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-39),

20 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-39),

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(choloyl))-GLP-1(7-40),

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-40),

25 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(choloyl))Arg³⁴-GLP-1(7-40),

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-40),

30 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(choloyl))-GLP-1(7-40),

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-40),

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-40),

In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-40),

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-40),

5 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-40),

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-40).

10 In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-36).

15 In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-36).

20 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-36).

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-36).

25 In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-36)amide.

30 In a further preferred embodiment, the GLP-1 derivative is Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(lithocholoyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys^{26,34}-bis(N^ε-(lithocholoyl))-GLP-1(7-36)amide.

In a further preferred embodiment, the GLP-1 derivative is Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-36)amide.

5 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-37).

10 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁸(N^ε-(lithocholoyl))-GLP-1(7-37).

15 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-37).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-38).

20 In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-38).

25 In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁸(N^ε-(lithocholoyl))-GLP-1(7-38).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-38).

30 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-39).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-39).

5 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg²⁶Lys³⁴(N^ε-(lithocholoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-40).

10 In a further preferred embodiment, the GLP-1 derivative is Gly⁸Lys²⁶(N^ε-(lithocholoyl))Arg³⁴-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-40).

In a further preferred embodiment, the GLP-1 derivative is Gly⁸Arg^{26,34}Lys³⁶(N^ε-(lithocholoyl))-GLP-1(7-40).

15 In a further preferred embodiment, the GLP-1 derivative is Arg³⁴,Lys²⁶(N^ε-decanoyl) GLP-1 (7-37).

In a further preferred embodiment, the GLP-1 derivative is Lys³⁴ (N^ε-(γ-glutamyl(N^α-tetradecanoyl))) GLP-1 (7-37).

20 In a further preferred embodiment, the GLP-1 derivative is Arg^{26,34},Lys⁸(N^ε-(γ-glutamyl(N^α-hexadecanoyl))) GLP-1 (7-37).

In a further preferred embodiment, the GLP-1 derivative is Arg³⁴,Lys²⁶(N^ε-(γ-glutamyl(N^α-dodecanoyl))) GLP-1 (7-37).

25 In a further preferred embodiment, the GLP-1 derivative is Arg³⁴,Lys²⁶(N^ε-(β-alanyl(N^α-hexadecanoyl))) GLP-1 (7-37).

In a further preferred embodiment, the GLP-1 derivative is Arg³⁴,Lys²⁶(N^ε-(α-glutamyl(N^α-hexadecanoyl))) GLP-1 (7-37).

In a further preferred embodiment, the GLP-1 derivative is Arg³⁴,Lys²⁶(N^ε-(piperidinyl-4-carbonyl(N-hexadecanoyl))) GLP-1 (7-37).

30 In a further preferred embodiment, the GLP-1 derivative is Arg³⁴,Lys²⁶(N^ε-(γ-glutamyl(N^α-decanoyl))) GLP-1 (7-37).

Other preferred embodiments will be described using the following abbreviations:

Glut = N^ε-(γ-L-glutamyl)

Aspa = N^ε-(β-L-asparagyl)

Glyc = N^ε-glycyl

GAB = N^ε-(α-(γ-aminobutanoyl))

ADod = N^α-dodecanoyl

5 ATet = N^α-tetradecanoyl

AHex = N^α-hexadecanoyl

AOct = N^α-octadecanoyl

ALit = N^α-lithocholyl

GDod = N^γ-dodecanoyl

10 GTet = N^γ-tetradecanoyl

GHex = N^γ-hexadecanoyl

GOct = N^γ-octadecanoyl

GLit = N^γ-lithocholyl

Other preferred derivatives of GLP-1 analogues of the present invention are:

- 15 Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-36); Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-36); Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36); Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-36)amide; Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-36)amide; Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36)amide; Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-37); Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-37); Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-37); Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-38); Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-38) ; Arg^{26,34}Lys³⁸-(Glut-ADod)-GLP-1(7-38); Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-39); Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-39); Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39);
- Gly⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-36); Gly⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-36); Gly⁸Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36); Gly⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-36)amide; Gly⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-36)amide; Gly⁸Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36)amide; Gly⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-37); Gly⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-37); Gly⁸Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-37); Gly⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-38); Gly⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-38) ; Gly⁸Arg^{26,34}Lys³⁸-(Glut-ADod)-GLP-1(7-38); Gly⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-39); Gly⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-39); Gly⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39);
- 25 Val⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-36); Val⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-36); Val⁸Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36); Val⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-36)amide; Val⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-36)amide; Val⁸Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36)amide; Val⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-37); Val⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-37); Val⁸Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-37); Val⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-38);

Val⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-38) ; Val⁸Arg^{26,34}Lys³⁸-(Glut-ADod)-GLP-1(7-38);
 Val⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-39); Val⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-39);
 Val⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39);
 Ser⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-36); Ser⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-36);
 5 Ser⁸Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36); Ser⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-36)amide;
 Ser⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-36)amide; Ser⁸Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-
 36)amide; Ser⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-37); Ser⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-37);
 Ser⁸Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-37); Ser⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-38);
 Ser⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-38) ; Ser⁸Arg^{26,34}Lys³⁸-(Glut-ADod)-GLP-1(7-38);
 10 Ser⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-39); Ser⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-39);
 Ser⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39);
 Thr⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-36); Thr⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-36);
 Thr⁸Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36); Thr⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-36)amide;
 Thr⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-36)amide; Thr⁸Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-
 15 36)amide; Thr⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-37); Thr⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-37);
 Thr⁸Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-37); Thr⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-38);
 Thr⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-38) ; Thr⁸Arg^{26,34}Lys³⁸-(Glut-ADod)-GLP-1(7-38);
 Thr⁸Arg²⁶Lys³⁴-(Glut-ADod)-GLP-1(7-39); Thr⁸Arg³⁴Lys²⁶-(Glut-ADod)-GLP-1(7-39);
 Thr⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39);
 20 Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-
 36)amide; Gly⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Gly⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-
 GLP-1(7-38); Gly⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-
 ADod)-GLP-1(7-36); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36)amide;
 Gly⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Gly⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-GLP-1(7-
 25 38); Gly⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39);
 Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-
 36)amide; Gly⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Gly⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-
 GLP-1(7-38); Gly⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-
 ADod)-GLP-1(7-36); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36)amide;
 30 Gly⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Gly⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-GLP-1(7-
 38); Gly⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39);
 Val⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36); Val⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-
 36)amide; Val⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Val⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-
 GLP-1(7-38); Val⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39); Val⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-

ADod)-GLP-1(7-36); Val⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36)amide;
 Val⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Val⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-GLP-1(7-
 38); Val⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39);
 Val⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36); Val⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-
 5 36)amide; Val⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Val⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-
 GLP-1(7-38); Val⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39); Val⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-
 ADod)-GLP-1(7-36); Val⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36)amide;
 Val⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Val⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-GLP-1(7-
 38); Val⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39);
 10 Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36); Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-
 36)amide; Ser⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Ser⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-
 GLP-1(7-38); Ser⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39); Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-
 ADod)-GLP-1(7-36); Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36)amide;
 Ser⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Ser⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-GLP-1(7-
 15 38); Ser⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39);
 Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36); Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-
 36)amide; Ser⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Ser⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-
 GLP-1(7-38); Ser⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39); Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-
 ADod)-GLP-1(7-36); Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36)amide;
 20 Ser⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Ser⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-GLP-1(7-
 38); Ser⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39);
 Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-
 36)amide; Thr⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Thr⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-
 GLP-1(7-38); Thr⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-
 25 ADod)-GLP-1(7-36); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36)amide;
 Thr⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Thr⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-GLP-1(7-
 38); Thr⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39);
 Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-
 36)amide; Thr⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Thr⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-
 30 GLP-1(7-38); Thr⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-
 ADod)-GLP-1(7-36); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ADod)-GLP-1(7-36)amide;
 Thr⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ADod)-GLP-1(7-37); Thr⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ADod)-GLP-1(7-
 38); Thr⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ADod)-GLP-1(7-39);

Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36)amide;
 Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-38);
 Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36);
 Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ADod)-
 5 GLP-1(7-36)amide; Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-
 (Glut-ADod)-GLP-1(7-38); Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-38);
 Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36)amide;
 Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-38);
 Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-
 10 36); Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ADod)-
 GLP-1(7-36)amide; Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys²³-
 (Glut-ADod)-GLP-1(7-38); Gly⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-38);
 Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36)amide;
 Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-38);
 15 Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-
 36); Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ADod)-
 GLP-1(7-36)amide; Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-
 (Glut-ADod)-GLP-1(7-38); Gly⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-38);
 Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36)amide;
 20 Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-38);
 Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36); Val⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-
 36); Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36)amide; Val⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ADod)-
 GLP-1(7-36)amide; Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-37); Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-
 (Glut-ADod)-GLP-1(7-38); Val⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-38);
 25 Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36)amide;
 Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-38);
 Val⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36); Val⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-
 36); Val⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36)amide; Val⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ADod)-
 GLP-1(7-36)amide; Val⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-37); Val⁸Asp¹⁹Arg^{26,34}Lys²³-
 30 (Glut-ADod)-GLP-1(7-38); Val⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-38);
 Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36)amide;
 Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-38);
 Val⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36); Val⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-
 36); Val⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36)amide; Val⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ADod)-

- GLP-1(7-36)amide; Val⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-37); Val⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-38); Val⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-38);
- Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36)amide;
- Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-38);
- 5 Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36); Ser⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36); Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36)amide; Ser⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36)amide; Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-37); Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-38); Ser⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-38);
- Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36)amide;
- 10 Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-38);
- Ser⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36); Ser⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36); Ser⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36)amide; Ser⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36)amide; Ser⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-37); Ser⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-38); Ser⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-38);
- 15 Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36)amide;
- Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-38);
- Ser⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36); Ser⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36); Ser⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36)amide; Ser⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36)amide; Ser⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-37); Ser⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-38); Ser⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-38);
- 20 Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36)amide;
- Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-38);
- Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36); Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36); Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36)amide; Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-36)amide;
- 25 GLP-1(7-36)amide; Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-37); Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-38); Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ADod)-GLP-1(7-38);
- Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36)amide;
- Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-38);
- Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36); Thr⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36);
- 30 Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36)amide; Thr⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-36)amide; Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-37); Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-38); Thr⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ADod)-GLP-1(7-38);
- Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-36)amide;
- Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-ADod)-GLP-1(7-38);

Ser⁸Arg²⁶Lys³⁴-(Glut-ATet)-GLP-1(7-39); Ser⁸Arg³⁴Lys²⁶-(Glut-ATet)-GLP-1(7-39);
 Ser⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39);
 Thr⁸Arg²⁶Lys³⁴-(Glut-ATet)-GLP-1(7-36); Thr⁸Arg³⁴Lys²⁶-(Glut-ATet)-GLP-1(7-36);
 Thr⁸Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36); Thr⁸Arg²⁶Lys³⁴-(Glut-ATet)-GLP-1(7-36)amide;
 5 Thr⁸Arg³⁴Lys²⁶-(Glut-ATet)-GLP-1(7-36)amide; Thr⁸Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide;
 Thr⁸Arg²⁶Lys³⁴-(Glut-ATet)-GLP-1(7-37); Thr⁸Arg³⁴Lys²⁶-(Glut-ATet)-GLP-1(7-37);
 Thr⁸Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-37); Thr⁸Arg²⁶Lys³⁴-(Glut-ATet)-GLP-1(7-38);
 Thr⁸Arg³⁴Lys²⁶-(Glut-ATet)-GLP-1(7-38) ; Thr⁸Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38);
 Thr⁸Arg²⁶Lys³⁴-(Glut-ATet)-GLP-1(7-39); Thr⁸Arg³⁴Lys²⁶-(Glut-ATet)-GLP-1(7-39);
 10 Thr⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39);
 Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide;
 Gly⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Gly⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38);
 Gly⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36);
 Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide; Gly⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37);
 15 Gly⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38); Gly⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39);
 Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide;
 Gly⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Gly⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38);
 Gly⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36);
 20 Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide;
 Gly⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Gly⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38);
 Gly⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39);
 Val⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36); Val⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide;
 Val⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Val⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38);
 25 Val⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39); Val⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36);
 Val⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide; Val⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37);
 Val⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38); Val⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39);
 Val⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36); Val⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide;
 30 Val⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Val⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38);
 Val⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39); Val⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36);
 Val⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide;
 Val⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Val⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38);
 Val⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39);

Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36); Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide; Ser⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Ser⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38); Ser⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39); Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36); Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide;

5 Ser⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Ser⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38); Ser⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39); Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36); Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide; Ser⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Ser⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38); Ser⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39); Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36); Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide;

10 Ser⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Ser⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38); Ser⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide; Thr⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Thr⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38); Thr⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide; Thr⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Thr⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38); Thr⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39);

15 Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide; Thr⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Thr⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38); Thr⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ATet)-GLP-1(7-36)amide; Thr⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ATet)-GLP-1(7-37); Thr⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ATet)-GLP-1(7-38); Thr⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ATet)-GLP-1(7-39);

20 Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36)amide; Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-38); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36)amide; Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-38); Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-38);

30 Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36)amide; Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-38); Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36); Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ATet)-GLP-

- 1(7-36)amide; Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-38); Gly⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-38);
- Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36)amide;
- Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-38);
- 5 Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36);
- Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36)amide;
- Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-38);
- Gly⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-38);
- Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36)amide;
- 10 Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-38);
- Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36); Val⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36);
- Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36)amide; Val⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36)amide;
- Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-37); Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-38);
- Val⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-38);
- 15 Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36)amide;
- Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-38);
- Val⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36); Val⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36);
- Val⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36)amide; Val⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36)amide;
- Val⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-37); Val⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-38);
- 20 Val⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-38);
- Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36)amide;
- Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-38);
- Val⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36); Val⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36);
- Val⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36)amide; Val⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36)amide;
- 25 1(7-36)amide; Val⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-37); Val⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-38);
- Val⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-38);
- Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36)amide;
- Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-38);
- Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36); Ser⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36);
- 30 36); Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36)amide; Ser⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36)amide;
- Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-37); Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-38);
- Ser⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-38);
- Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36)amide;
- Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-38);

Ser⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36); Ser⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36); Ser⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36)amide; Ser⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36)amide; Ser⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-37); Ser⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-38); Ser⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-38);
 5 Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36)amide; Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-38); Ser⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36); Ser⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36); Ser⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36)amide; Ser⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36)amide; Ser⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-37); Ser⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-38); Ser⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-38);
 10 Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36)amide; Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-38); Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36); Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36); Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36)amide; Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-36)amide; Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-37); Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-38); Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ATet)-GLP-1(7-38);
 15 Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36)amide; Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-38); Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36); Thr⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36); Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36)amide; Thr⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-36)amide; Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-37); Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-38); Thr⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-ATet)-GLP-1(7-38);
 20 Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36)amide; Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-38); Thr⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36); Thr⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36); Thr⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36)amide; Thr⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-36)amide; Thr⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-37); Thr⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-38); Thr⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-ATet)-GLP-1(7-38);
 25 Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-36); Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-36); Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36); Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-36)amide; Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-36)amide; Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36)amide; Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-37); Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-37); Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-37); Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-38); Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-38); Arg^{26,34}Lys³⁸-(Glut-AHex)-GLP-1(7-38);

- 1(7-38); Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-39); Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-39);
 Arg^{26,34}Lys³⁹-(Glut-AHex)-GLP-1(7-39);
 Gly⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-36); Gly⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-36);
 Gly⁸Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36); Gly⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-36)amide;
 5 Gly⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-36)amide; Gly⁸Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36)amide;
 Gly⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-37); Gly⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-37);
 Gly⁸Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-37); Gly⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-38);
 Gly⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-38) ; Gly⁸Arg^{26,34}Lys³⁸-(Glut-AHex)-GLP-1(7-38);
 Gly⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-39); Gly⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-39);
 10 Gly⁸Arg^{26,34}Lys³⁹-(Glut-AHex)-GLP-1(7-39);
 Val⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-36); Val⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-36);
 Val⁸Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36); Val⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-36)amide;
 Val⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-36)amide; Val⁸Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36)amide;
 Val⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-37); Val⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-37);
 15 Val⁸Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-37); Val⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-38);
 Val⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-38) ; Val⁸Arg^{26,34}Lys³⁸-(Glut-AHex)-GLP-1(7-38);
 Val⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-39); Val⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-39);
 Val⁸Arg^{26,34}Lys³⁹-(Glut-AHex)-GLP-1(7-39);
 Ser⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-36); Ser⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-36);
 20 Ser⁸Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36); Ser⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-36)amide;
 Ser⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-36)amide; Ser⁸Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36)amide;
 Ser⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-37); Ser⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-37);
 Ser⁸Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-37); Ser⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-38);
 Ser⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-38) ; Ser⁸Arg^{26,34}Lys³⁸-(Glut-AHex)-GLP-1(7-38);
 25 Ser⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-39); Ser⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-39);
 Ser⁸Arg^{26,34}Lys³⁹-(Glut-AHex)-GLP-1(7-39);
 Thr⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-36); Thr⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-36);
 Thr⁸Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36); Thr⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-36)amide;
 Thr⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-36)amide; Thr⁸Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36)amide;
 30 36)amide; Thr⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-37); Thr⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-37);
 Thr⁸Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-37); Thr⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-38);
 Thr⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-38) ; Thr⁸Arg^{26,34}Lys³⁸-(Glut-AHex)-GLP-1(7-38);
 Thr⁸Arg²⁶Lys³⁴-(Glut-AHex)-GLP-1(7-39); Thr⁸Arg³⁴Lys²⁶-(Glut-AHex)-GLP-1(7-39);
 Thr⁸Arg^{26,34}Lys³⁹-(Glut-AHex)-GLP-1(7-39);

Ser⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-AHex)-GLP-1(7-37); Ser⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-AHex)-GLP-1(7-38); Ser⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-AHex)-GLP-1(7-39);
 Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36)amide; Thr⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-AHex)-GLP-1(7-37); Thr⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-AHex)-GLP-1(7-38); Thr⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-AHex)-GLP-1(7-39); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36)amide; Thr⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-AHex)-GLP-1(7-37); Thr⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-AHex)-GLP-1(7-38); Thr⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-AHex)-GLP-1(7-39); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36)amide; Thr⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-AHex)-GLP-1(7-37); Thr⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-AHex)-GLP-1(7-38); Thr⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-AHex)-GLP-1(7-39); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-AHex)-GLP-1(7-36)amide; Thr⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-AHex)-GLP-1(7-37); Thr⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-AHex)-GLP-1(7-38); Thr⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-AHex)-GLP-1(7-39); Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-36)amide; Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-38); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-36); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-36)amide; Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-38); Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-38); Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-36)amide; Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-38); Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-36); Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-36)amide; Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-38); Gly⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-38); Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-36)amide; Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-38); Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-36); Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-36)amide; Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-38); Gly⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-38); Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-36)amide; Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-38);

Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-36)amide;
 Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-38);
 Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-36); Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-
 36); Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-36)amide; Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AHex)-
 5 GLP-1(7-36)amide; Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-37); Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-
 (Glut-AHex)-GLP-1(7-38); Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AHex)-GLP-1(7-38);
 Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-36)amide;
 Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-38);
 Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-36); Thr⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-
 10 36); Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-36)amide; Thr⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AHex)-
 GLP-1(7-36)amide; Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-37); Thr⁸Asp¹⁹Arg^{26,34}Lys²³-
 (Glut-AHex)-GLP-1(7-38); Thr⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AHex)-GLP-1(7-38);
 Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-36)amide;
 Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-38);
 15 Thr⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-36); Thr⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-
 36); Thr⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-36)amide; Thr⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AHex)-
 GLP-1(7-36)amide; Thr⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-37); Thr⁸Asp¹⁹Arg^{26,34}Lys²⁷-
 (Glut-AHex)-GLP-1(7-38); Thr⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AHex)-GLP-1(7-38);
 Arg²⁶Lys³⁴-(Glut-AOct)-GLP-1(7-36); Arg³⁴Lys²⁶-(Glut-AOct)-GLP-1(7-36); Arg^{26,34}Lys³⁶-(Glut-
 20 AOct)-GLP-1(7-36); Arg²⁶Lys³⁴-(Glut-AOct)-GLP-1(7-36)amide; Arg³⁴Lys²⁶-(Glut-AOct)-GLP-
 1(7-36)amide; Arg^{26,34}Lys³⁶-(Glut-AOct)-GLP-1(7-36)amide; Arg²⁶Lys³⁴-(Glut-AOct)-GLP-1(7-
 37); Arg³⁴Lys²⁶-(Glut-AOct)-GLP-1(7-37); Arg^{26,34}Lys³⁶-(Glut-AOct)-GLP-1(7-37); Arg²⁶Lys³⁴-
 (Glut-AOct)-GLP-1(7-38); Arg³⁴Lys²⁶-(Glut-AOct)-GLP-1(7-38); Arg^{26,34}Lys³⁶-(Glut-AOct)-GLP-
 1(7-38); Arg²⁶Lys³⁴-(Glut-AOct)-GLP-1(7-39); Arg³⁴Lys²⁶-(Glut-AOct)-GLP-1(7-39); Arg^{26,34}Lys³⁹-
 25 (Glut-AOct)-GLP-1(7-39);
 Gly⁸Arg²⁶Lys³⁴-(Glut-AOct)-GLP-1(7-36); Gly⁸Arg³⁴Lys²⁶-(Glut-AOct)-GLP-1(7-36);
 Gly⁸Arg^{26,34}Lys³⁶-(Glut-AOct)-GLP-1(7-36); Gly⁸Arg²⁶Lys³⁴-(Glut-AOct)-GLP-1(7-36)amide;
 Gly⁸Arg³⁴Lys²⁶-(Glut-AOct)-GLP-1(7-36)amide; Gly⁸Arg^{26,34}Lys³⁶-(Glut-AOct)-GLP-1(7-
 36)amide; Gly⁸Arg²⁶Lys³⁴-(Glut-AOct)-GLP-1(7-37); Gly⁸Arg³⁴Lys²⁶-(Glut-AOct)-GLP-1(7-37);
 30 Gly⁸Arg^{26,34}Lys³⁶-(Glut-AOct)-GLP-1(7-37); Gly⁸Arg²⁶Lys³⁴-(Glut-AOct)-GLP-1(7-38);
 Gly⁸Arg³⁴Lys²⁶-(Glut-AOct)-GLP-1(7-38); Gly⁸Arg^{26,34}Lys³⁸-(Glut-AOct)-GLP-1(7-38);
 Gly⁸Arg²⁶Lys³⁴-(Glut-AOct)-GLP-1(7-39); Gly⁸Arg³⁴Lys²⁶-(Glut-AOct)-GLP-1(7-39);
 Gly⁸Arg^{26,34}Lys³⁹-(Glut-AOct)-GLP-1(7-39);

Val⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-36); Val⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-36);
 Val⁸Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-36); Val⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-36)amide;
 Val⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-36)amide; Val⁸Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-
 36)amide; Val⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-37); Val⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-37);
 5 Val⁸Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-37); Val⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-38);
 Val⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-38) ; Val⁸Arg^{26,34}Lys³⁸-(Glut-AOOct)-GLP-1(7-38);
 Val⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-39); Val⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-39);
 Val⁸Arg^{26,34}Lys³⁹-(Glut-AOOct)-GLP-1(7-39);
 Ser⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-36); Ser⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-36);
 10 Ser⁸Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-36); Ser⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-36)amide;
 Ser⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-36)amide; Ser⁸Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-
 36)amide; Ser⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-37); Ser⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-37);
 Ser⁸Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-37); Ser⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-38);
 Ser⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-38) ; Ser⁸Arg^{26,34}Lys³⁸-(Glut-AOOct)-GLP-1(7-38);
 15 Ser⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-39); Ser⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-39);
 Ser⁸Arg^{26,34}Lys³⁹-(Glut-AOOct)-GLP-1(7-39);
 Thr⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-36); Thr⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-36);
 Thr⁸Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-36); Thr⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-36)amide;
 Thr⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-36)amide; Thr⁸Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-
 20 36)amide; Thr⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-37); Thr⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-37);
 Thr⁸Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-37); Thr⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-38);
 Thr⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-38) ; Thr⁸Arg^{26,34}Lys³⁸-(Glut-AOOct)-GLP-1(7-38);
 Thr⁸Arg²⁶Lys³⁴-(Glut-AOOct)-GLP-1(7-39); Thr⁸Arg³⁴Lys²⁶-(Glut-AOOct)-GLP-1(7-39);
 Thr⁸Arg^{26,34}Lys³⁹-(Glut-AOOct)-GLP-1(7-39);
 25 Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-36); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-
 36)amide; Gly⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-AOOct)-GLP-1(7-37); Gly⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-AOOct)-
 GLP-1(7-38); Gly⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-AOOct)-GLP-1(7-39); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-
 AOOct)-GLP-1(7-36); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-36)amide;
 Gly⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-AOOct)-GLP-1(7-37); Gly⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-AOOct)-GLP-1(7-38);
 30 Gly⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-AOOct)-GLP-1(7-39);
 Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-36); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-
 36)amide; Gly⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-AOOct)-GLP-1(7-37); Gly⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-AOOct)-
 GLP-1(7-38); Gly⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-AOOct)-GLP-1(7-39); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-
 AOOct)-GLP-1(7-36); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-36)amide;

GLP-1(7-38); Thr⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-AOOct)-GLP-1(7-39); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-36);
 Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-AOOct)-GLP-1(7-36)amide;
 Thr⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-AOOct)-GLP-1(7-37); Thr⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-AOOct)-GLP-1(7-38); Thr⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-AOOct)-GLP-1(7-39);
 5 Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-36)amide;
 Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-38);
 Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-36);
 Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-36)amide;
 Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-38); Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-38);
 10 Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-36)amide;
 Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-38);
 Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-36);
 Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-36)amide;
 15 Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-38);
 Gly⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-38);
 Arg^{26,34}Lys²⁷-(Glut-AOOct)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-AOOct)-GLP-1(7-36)amide;
 Arg^{26,34}Lys²⁷-(Glut-AOOct)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-AOOct)-GLP-1(7-38);
 Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOOct)-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AOOct)-GLP-1(7-36);
 20 Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOOct)-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AOOct)-GLP-1(7-36)amide;
 Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOOct)-GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOOct)-GLP-1(7-38);
 Gly⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AOOct)-GLP-1(7-38);
 Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-36)amide;
 Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-38);
 25 Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-36); Val⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-36);
 Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-36)amide; Val⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-36)amide;
 Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-37); Val⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-38);
 Val⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AOOct)-GLP-1(7-38);
 Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-36)amide;
 30 Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-38);
 Val⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-36); Val⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-36);
 Val⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-36)amide; Val⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-36)amide;
 Val⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-37); Val⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-38);
 Val⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AOOct)-GLP-1(7-38);

Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36)amide;
 Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-38);
 Val⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36); Val⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-
 36); Val⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36)amide; Val⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AOct)-
 5 GLP-1(7-36)amide; Val⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-37); Val⁸Asp¹⁹Arg^{26,34}Lys²⁷-
 (Glut-AOct)-GLP-1(7-38); Val⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-38);
 Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-36)amide;
 Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-38);
 Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-36); Ser⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-
 10 36); Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-36)amide; Ser⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AOct)-
 GLP-1(7-36)amide; Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-37); Ser⁸Asp¹⁹Arg^{26,34}Lys¹⁸-
 (Glut-AOct)-GLP-1(7-38); Ser⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-38);
 Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-36)amide;
 Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-38);
 15 Ser⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-36); Ser⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-
 36); Ser⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-36)amide; Ser⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AOct)-
 GLP-1(7-36)amide; Ser⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-37); Ser⁸Asp¹⁹Arg^{26,34}Lys²³-
 (Glut-AOct)-GLP-1(7-38); Ser⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-38);
 Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36)amide;
 20 Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-38);
 Ser⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36); Ser⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-
 36); Ser⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36)amide; Ser⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AOct)-
 GLP-1(7-36)amide; Ser⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-37); Ser⁸Asp¹⁹Arg^{26,34}Lys²⁷-
 (Glut-AOct)-GLP-1(7-38); Ser⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-38);
 25 Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-36)amide;
 Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-38);
 Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-36); Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-
 36); Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-36)amide; Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AOct)-
 GLP-1(7-36)amide; Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-37); Thr⁸Asp¹⁹Arg^{26,34}Lys¹⁸-
 30 (Glut-AOct)-GLP-1(7-38); Thr⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-AOct)-GLP-1(7-38);
 Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-36); Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-36)amide;
 Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-37); Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-38);
 Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-36); Thr⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-
 36); Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-36)amide; Thr⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AOct)-

- GLP-1(7-36)amide; Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-37); Thr⁸Asp¹⁹Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-38); Thr⁸Asp¹⁷Arg^{26,34}Lys²³-(Glut-AOct)-GLP-1(7-38);
- Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36); Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36)amide;
- Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-37); Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-38);
- 5 Thr⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36); Thr⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36); Thr⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36)amide; Thr⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-36)amide; Thr⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-37); Thr⁸Asp¹⁹Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-38); Thr⁸Asp¹⁷Arg^{26,34}Lys²⁷-(Glut-AOct)-GLP-1(7-38);
- Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-36); Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-36); Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36);
- 10 Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-36)amide; Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-36)amide; Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-37); Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-37); Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-37); Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-38); Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-38); Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-39); Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-39); Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39);
- 15 Gly⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-36); Gly⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-36); Gly⁸Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Gly⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-36)amide; Gly⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-36)amide; Gly⁸Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Gly⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-37); Gly⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-37);
- 20 Gly⁸Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-37); Gly⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-38); Gly⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-38); Gly⁸Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Gly⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-39); Gly⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-39); Gly⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39);
- Val⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-36); Val⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-36);
- 25 Val⁸Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Val⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-36)amide; Val⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-36)amide; Val⁸Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Val⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-37); Val⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-37); Val⁸Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-37); Val⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-38); Val⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-38); Val⁸Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38);
- 30 Val⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-39); Val⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-39); Val⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39); Ser⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-36); Ser⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-36); Ser⁸Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Ser⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-36)amide; Ser⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-36)amide; Ser⁸Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide;

- Ser⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-37); Ser⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-37);
 Ser⁸Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-37); Ser⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-38);
 Ser⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-38) ; Ser⁸Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38);
 Ser⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-39); Ser⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-39);
 5 Ser⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39); Thr⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-36);
 Thr⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-36); Thr⁸Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Thr⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-36)amide;
 Thr⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-36)amide; Thr⁸Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide;
 Thr⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-37); Thr⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-37);
 10 Thr⁸Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-37); Thr⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-38);
 Thr⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-38) ; Thr⁸Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38);
 Thr⁸Arg²⁶Lys³⁴-(Glut-ALit)-GLP-1(7-39); Thr⁸Arg³⁴Lys²⁶-(Glut-ALit)-GLP-1(7-39);
 Thr⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39);
 Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-
 15 36)amide; Gly⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-GLP-1(7-37); Gly⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-
 GLP-1(7-38); Gly⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-
 GLP-1(7-36); Gly⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Gly⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-
 ALit)-GLP-1(7-37); Gly⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Gly⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-
 ALit)-GLP-1(7-39);
 20 Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-
 36)amide; Gly⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-GLP-1(7-37); Gly⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-
 GLP-1(7-38); Gly⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-
 GLP-1(7-36); Gly⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Gly⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-
 ALit)-GLP-1(7-37); Gly⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Gly⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-
 25 ALit)-GLP-1(7-39);
 Val⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Val⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-
 36)amide; Val⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-GLP-1(7-37); Val⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-
 1(7-38); Val⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39); Val⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-
 1(7-36); Val⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Val⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-
 30 GLP-1(7-37); Val⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Val⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-
 GLP-1(7-39);
 Val⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Val⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-
 36)amide; Val⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-GLP-1(7-37); Val⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-
 GLP-1(7-38); Val⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39); Val⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-

GLP-1(7-36); Val⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Val⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-GLP-1(7-37); Val⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Val⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39);
 Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Ser⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-GLP-1(7-37); Ser⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Ser⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39); Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Ser⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Ser⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-GLP-1(7-37); Ser⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Ser⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39);
 Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Ser⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-GLP-1(7-37); Ser⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Ser⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39); Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Ser⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Ser⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-GLP-1(7-37); Ser⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Ser⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39);
 Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Thr⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-GLP-1(7-37); Thr⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Thr⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Thr⁸Glu³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Thr⁸Glu³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-GLP-1(7-37); Thr⁸Glu³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Thr⁸Glu³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39);
 Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Thr⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-GLP-1(7-37); Thr⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Thr⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36); Thr⁸Asp³⁵Arg^{26,34}Lys³⁶-(Glut-ALit)-GLP-1(7-36)amide; Thr⁸Asp³⁶Arg^{26,34}Lys³⁷-(Glut-ALit)-GLP-1(7-37); Thr⁸Asp³⁷Arg^{26,34}Lys³⁸-(Glut-ALit)-GLP-1(7-38); Thr⁸Asp³⁸Arg^{26,34}Lys³⁹-(Glut-ALit)-GLP-1(7-39);
 Arg^{26,34}Lys¹⁸-(Glut-ALit)-GLP-1(7-36); Arg^{26,34}Lys¹⁸-(Glut-ALit)-GLP-1(7-36)amide; Arg^{26,34}Lys¹⁸-(Glut-ALit)-GLP-1(7-37); Arg^{26,34}Lys¹⁸-(Glut-ALit)-GLP-1(7-38); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ALit)-GLP-1(7-36); Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ALit)-GLP-1(7-36); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ALit)-GLP-1(7-36)amide; Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ALit)-GLP-1(7-36)amide; Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ALit)-GLP-1(7-37); Gly⁸Asp¹⁹Arg^{26,34}Lys¹⁸-(Glut-ALit)-GLP-1(7-38); Gly⁸Asp¹⁷Arg^{26,34}Lys¹⁸-(Glut-ALit)-GLP-1(7-38);