NOVEL COMPOUNDS AS GLP-1 AGONISTS

Field of Invention

The present invention relates to novel compounds of general formula (I), their tautomeric forms, novel intermediates involved in their synthesis, their pharmaceutically acceptable salts and pharmaceutical compositions containing them.

$$A\text{-}X_1\text{-}\ S_1\text{-}Y\text{-}S_2\text{-}X_2\text{-}B \quad (I)$$

In particular, the present invention relates to novel Glucagon-Like Peptide-1 (GLP-1) peptide mimics (peptidomimetic), which act as GLP-1 receptor agonists and exhibit most of the biological activity of the native GLP-1. Furthermore, these GLP-1 peptidomimetics exhibit increased stability to proteolytic cleavage, especially against DPP-IV (Dipeptidyl peptidase-IV) enzyme and can be delivered by both invasive and various non-invasive routes of administrations such as oral, nasal, buccal, pulmonary and transdermal route of administration, for the treatment or prevention of diabetes and related conditions.

The present invention also relates to a process of preparing compounds of general formula (I), their tautomeric forms, their pharmaceutically acceptable salts, pharmaceutical compositions containing them, and novel intermediates involved in their synthesis.

Background to the invention

The GLP-1 (7-36) amide is a product of the preproglucagon gene, which is secreted from intestinal L-cells, in response to the ingestion of food. The physiological action of GLP-1 has gained considerable interest. GLP-1 exerts multiple action by stimulating insulin secretion from pancreatic β-cells, in a glucose dependent manner (insulinotropic action). GLP-1 also lowers circulating plasma glucagon concentration, by inhibiting its secretion from α-cells (Drucker D. J., Endocrinology, 142, 521-527, 2001). More recently, it has become clear that GLP-1 also exhibits properties like stimulation of β-cell growth, appetite suppression, delayed gastric emptying and stimulation of insulin sensitivity (Nauck, Horm. Metab. Res., 47, 1253-1258, 1997).

The venom of the Gila Monster *Heloderma Suspectum* contains a 39 amino acid peptide called Exendin-4 (EX-4) that shares around 50 % sequence identity to GLP-1 itself, exhibits a very potent GLP-1R (Glucagon like peptide-1 receptor) agonist activity (Thorens B., Diabetes, 42, 1678 – 1682, 1993). Indeed, it was found that EX-4 is much more potent than native GLP-1 peptide, because of its relatively longer half-

life (25 min., iv route of administration), compared to GLP-1 (2-5 min., iv route of administration). Exendin-4 binds with greater affinity to the GLP-1R, due to presence of the nine extra C-terminal sequence (Doyle M.E., Regulatory Peptides, 114, 153-158, 2003). Thus, the above stated pharmacological properties of GLP-1R agonists make it a highly desirable therapeutic agent for the treatment of diabetes.

Native or synthetic GLP-1 peptide is rapidly metabolized by the proteolytic enzymes, such as dipeptidyl peptidase-IV (DPP-IV) into an inactive metabolite, thereby limiting the use of GLP-1 as a drug. Currently, various analogs of GLP-1 and EX-4, such as Liraglutide / NN2211 (Novo Nordisk; Phase-III; WO 1998 008871), BIM 51077 (Ipsen; Phase-II; WO 2000 034331), CJC-1131 (ConjuChem; Phase-II; WO 2000 069911), ZP-10 (Zealand & Aventis; Phase-II; WO 2001 004156) are in different stages of clinical development (Nauck M.A., Regulatory Peptides, 115, 13-19, 2004). However, all these peptides require delivery via parenteral route of administration, including BYETTA® (Exendin-4, AC 2933; WO 2001 051078), which is recently launched in the market (Amylin & Lilly). Thus, there exists a critical need to develop a biologically active GLP-1 mimic that possesses extended pharmacodynamic profiles.

The GLP-1 R is a seven-transmembrane domain G-protein-coupled receptor (GPCR) and it is located on the cell membrane of pancreatic β-cells. The effector system of GLP-1 R is the Adenylyl Cyclase (AC) enzyme. Interaction of GLP-1 agonist with GLP-1R causes activation of AC, which converts ATP to cAMP. Increase in the intracellular cAMP level raises the ratio of ADP/ATP, thereby initiating the cell depolarization (due to closure of K_{ATP} channel). Increase in the intracellular cAMP level also activates Protein Kinase (PK-A & PK-C), which raises the cystolic Ca^{2+} concentration, by opening of L-type of Ca^{2+} channel. An increase in the intracellular Ca^{2+} leads to exocytosis of insulin, in pancreatic β-cells (Fehmann, H.C., Endocr. Rev., 16, 390 – 410, 1995).

A general mechanism of peptide ligand interaction with class-B GPCRs has emerged recently, termed the 'two-domain' model (Hoare S.R.J., Drug Discovery Today, Vol. 10 (6), 417-427, 2005). In this two-domain model, the C-terminal portion of the peptide binds to the N-domain of the receptor and the N-terminal ligand region binds to the J-domain (transmembrane) region of GPCR. This interaction activates the receptor and thereby stimulates intracellular signaling. The receptor binding and activation occurs in two separate domains of Exendin, but they are closely coupled in GLP-1 (Eng J., J.B.C., 272 (34), 21291-21296, 1997).

Prior art

Earlier, Bristol-Myers Squibb (BMS), Princeton, NJ (US), reported human GLP-1 mimics, with general formula Xaa1-Xaa11, wherein Xaa1-Xaa9 represent the first 1-9 residues of GLP-1 peptide with some analogs wherein Xaa2 represents either Ala or is optionally replaced with Aib, and Xaa6 represents Phe or is optionally replaced with α-Me-Phe(2-F)-OH and Xaa10 & Xaa11 represents combination of substituted or unsubstituted biphenyl alanine (Bip) derivatives (WO 03/ 033671A2; US 2004/ 0127423 A1; WO 2004/ 094461 A2; US 2006 / 0004222 A1 and WO 2006/ 014287 A1).

The present invention provides novel GLP-1 peptide mimics of formula (I) (hereinafter referred to as peptidomimetics), which act as a GLP-1R agonist and exhibit most of the biological activity of the native GLP-1 peptide. Furthermore, these GLP-1 peptidomimetics exhibit increased stability to proteolytic cleavage, especially against DPP-IV enzyme and therefore, surprisingly found to have an increased half-life making them suitable for the treatment / mitigation / prophylaxis of both type 1 & type 2 diabetes, metabolic disorders, obesity and related disorders.

Summary of the invention

The present invention describes a group of novel peptidomimetics useful for the treatment of diabetes. These compounds are defined by the general formula (I) as given below. The compounds of the present invention are useful in the treatment of the human or animal body, by regulation of insulin secretion. The compounds of this invention are therefore suitable for the treatment/mitigation/regulation or prophylaxis of both type 1 & type 2 diabetes and obesity.

Preferred embodiments

The main object of the present invention is to provide novel compounds of general formula (I), their tautomeric forms, novel intermediates involved in their synthesis, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates and pharmaceutical compositions containing them or their mixtures, suitable for the treatment treatment/mitigation/regulation of diabetes.

In an embodiment is provided a process for the preparation of novel compounds of general formula (I), their tautomeric forms, their pharmaceutically acceptable salts, pharmaceutically acceptable solvates and pharmaceutical compositions containing them.

In another embodiment, is provided pharmaceutical compositions containing compounds of general formula (I), their tautomeric forms, their pharmaceutically acceptable salts, solvates and their mixtures having pharmaceutically acceptable carriers, solvents, diluents, excipients and other media normally employed in their manufacture.

In a further another embodiment is provided the use of the novel compounds of the present invention as antidiabetic agents, by administering a therapeutically effective & non-toxic amount of the compound of formula (I), or their pharmaceutically acceptable compositions to the mammals those are need of such treatment.

Abbreviations used

The following abbreviations are employed in the examples and elsewhere herein:

Aib = α-Aminoisobutyric acid,

ACN or MeCN = Acetonitrile,

Bip = Biphenylalanine residue,

Bip(4-fluro)= 4-fluoro-biphenylalanine residue,

Bip(2-Me)= 2-methyl biphenyl residue,

Bip(2-Et)= 2-ethyl biphenyl residue,

Bip(2-CN)= 2-nitrile biphenyl residue,

Bip(2-Ipr)= 2-Isopropyl biphenyl residue,

Bip(2'-Et-4'-OMe)= 2-ethyl-4-methoxy-biphenyl residue,

Bip(2-F)= 2-fluro-biphenyl residue,

Bn = Benzyl,

Boc = tert-Butoxycarbonyl,

But= O-tert-butyl group,

cAMP= Adenosine 3',5'-cyclic monophosphate,

DCM = Dichloromethane,

DMF = N,N-Dimethylformamide,

DIPCDI= Di-isopropylcarbodiimide,

DIPEA= Diisopropylethylamine,

4-DBF=4-dibenzofuran-Phe-OH residue,

4-DBT=4-dibenzothiophene-Phe-OH residue,

Dihydro-Phen=2-(9,10-Dihydro-phenanthrenyl]-Ala-OH residue,

Et = Ethyl,

Et_2O = Diethyl ether,

Fmoc = Fluorenylmethoxycarbonyl,

2-Flu=2-Fluorenyl-Ala-OH residue,

g = Gram (s),

GTT = Glucose Tolerance Test,

GLP-1R = Glucagon Like Peptide-1 Receptor,

h = Hour (s),

HOBt = Hydroxybenzotriazole,

HOAT= 7-Aza-hydroxybenzotriazole,

HBTU = 2-(1H-benzotriazole-1-yl)-1,1,3,3-tetramethyl aminium hexafluorophosphate,

HPLC = High Performance Liquid Chromatography,

L = Liter,

LC /MS = Liquid Chromatography / Mass Spectrometry,

4-(2'-Me-Ph)-3-Pyr-Ala= 4-(2'-methylphenyl)-3-pyridylalanine residue,

Me = Methyl,

Min = minute (s),

ml = milliliter,

µl = microliter,

mg = milligram (s),

mmol = millimole (s),

fmol = fantomolar

MS= Mass Spectrometry,

1-Nap=4-(1-Naphthyl)-Phe residue,

2-Nap=4-(2-Naphthyl)-Phe residue,

Phen=2-(Phenanthrenyl)-Ala-OH residue,

Pbf= Pentamethylbenzofuran-5-sulfonyl,

PyBOP = Benzotriazole-1-yl-oxy-tris-pyrrolidino-phosphonium hexafluorophosphate,

SPPS = Solid Phase Peptide Synthesis,

Sc = sub-cutaneous,

TrPh=4-phenyl-biphenylalanine residue,

TMS = Trimethylsilyl,

TIPS = Triisopropylsilane,

TFA = Trifluoroacetic acid,

TBTU= 2-(1H-benzotriazole-1-yl)-1,1,3,3-tetramethylaminium tetrafluoroborate,

Trt= Trityl group,

(α-Me)Phe(2-F)= α-methyl-2-fluoro-phenylalanine residue,

-(N(Me))-= N-methylated amide bond,

D-Alanine represented by 'a' and D-Bip represent 'D'-Biphenyl alanine residue,

ip = intra-peritoneal,

Sequence of GLP-1 peptide = NH_2-HAEGTFTSDVSSYLEGQAAKEFIAWLVKGR-$CONH_2$ (30 amino acids). The 30 amino acids of said GLP-1 peptide are shown in **Seq ID 1.**

HAEGTFTSDVSSYLEGQAAKEFIAWLVKGR ---**Seq ID 1**

Sequence of Exendin-4 = NH_2-HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS-$CONH_2$ (39 amino acids). The 39 amino acids of Extendin -4 are shown in **Seq ID 2.**

HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS ---**Seq ID 2**

Detailed description

In accordance with the present invention, synthetic GLP-1 analog peptides / peptidomimetics are provided, which have the structural formula (I),

$$\mathbf{A\text{-}X_1\text{-}\ S_1\text{-}Y\text{-}S_2\text{-}X_2\text{-}B\ \ (I)}$$

wherein,

A represents –NH-R_1, wherein R_1 represents hydrogen, groups selected from linear or branched (C_1-C_{15}) alkyl chain, such as methyl, ethyl, propyl, isopropyl, n-butyl, iso-butyl, t-butyl, pentyl, isopentyl, hexyl, heptyl, octyl, decyl groups and the like, an amino acid or peptide containing one, two or three natural amino acid residues, R_3-CO- group, such as (2-Hydroxy-phenyl)-acetyl group and the like, R_3O-C(O)- group, such as Fmoc group and the like, a sulfonyl group of formula R_3-SO_2-, each of these groups may be substituted, wherein R_3 is selected from linear or branched (C_1-C_{10}) alkyl, such as methyl, ethyl, propyl, isopropyl, n-butyl, iso-butyl, t-butyl, pentyl, isopentyl, hexyl, heptyl, octyl, decyl groups and the like, (C_3-C_6) cycloalkyl, such as cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl groups and the like, aryl groups selected from phenyl, napthyl, indanyl, fluorenyl, biphenyl and the like, heteroaryl groups selected from pyridyl, thienyl, furyl, imidzolyl, benzofuranyl and the like, arylalkyl groups selected from benzyl, naphthylmethyl and the like, each of these groups may be substituted;

B represents –$COOR_2$, -$CONHR_2$ or CH_2OR_2, R_2 represents H, groups selected from linear or branched (C_1-C_{10}) alkyl group, such as methyl, ethyl, propyl, isopropyl, n-butyl, iso-butyl, t-butyl, pentyl, isopentyl, hexyl, heptyl, octyl, decyl groups and the like, aryl groups selected from phenyl, napthyl, indanyl, fluorenyl, biphenyl and the like, aralkyl groups, each of these groups may be substituted,

each of S_1 and S_2 may independently be a bond or independently represents a group '-NH-$(CH_2)_n$-COO-', where, n=1-9; such as derivatives of amino acetic acid, amino propionic acid, amino butanoic acid, amino pentanoic acid, amino hexanoicacid, amino heptanoic acid, amino octanoic acid, amino-nonanoic acid, amino-decanoic acid and the like;

Y represents a bond or –CO-, -$(CH_2)_m$- (m = 1-3), 'O', 'S', -CO-NH-, -CO-NR_4-, or represents a short peptide containing one or two or three amino acids selected from natural or non-natural amino acids; where R_4 represents H, optionally substituted groups selected from linear or branched (C_1-C_{10}) alkyl group such as methyl, ethyl, propyl, isopropyl, n-butyl, iso-butyl, t-butyl, pentyl, isopentyl, hexyl, heptyl, octyl, decyl groups and the like, aryl groups selected from phenyl, napthyl, indanyl, fluorenyl, biphenyl and the like; with the proviso that

i) when S_1-Y-S_2 represents a bond,

X_1 is selected from the following amino acid sequences

HAEGTFTSD **(Seq ID 3)**, HAEGTFTSDV **(Seq ID 4)**, HAEGTFTSDVS **(Seq ID 5)**, HAEGTFTSDVSS **(Seq ID 6)**, HAEGTFTSDVSSY **(Seq ID 7)**, HAEGTFTSDVSSYL **(Seq ID 8)**, HAEGTFTSDVSSYLE **(Seq ID 9)**, HAEGTFTSDVSSYLEG **(Seq ID 10)**, HAEGTFTSDVSSYLEGQ **(Seq ID 11)**, HAEGTFTSDVSSYLEGQA **(Seq ID 12)**, HAEGTFTSDVSSYLEGQAA **(Seq ID 13)**, HAEGTFTSDVSSYLEGQAAK **(Seq ID 14)**, HAEGTFTSDVSSYLEGQAAKE **(Seq ID 15)**, HAEGTFTSDVSSYLEGQAAKEF **(Seq ID 16)**, HAEGTFTSDVSSYLEGQAAKEFI **(Seq ID 17)**, with the further option that one or more of these amino acids may be replaced by unnatural amino acids, and X_2 is selected from the following amino acid sequences

GPSSGAPPPS **(Seq ID 18)**or

KELEKLL **(Seq ID 19)**or

GPPS or **(Seq ID 20)**

VKGR **(Seq ID 21)**;

ii) and when S_1-Y-S_2 does not represent a bond

X_1 is selected from the following amino acid sequences

HA **(Seq ID 22)**, HAE **(Seq ID 23)**, HAEG **(Seq ID 24)**, HAEGT **(Seq ID 25)**, HAEGTF **(Seq ID 26)**, HAEGTFT **(Seq ID 27)**, HAEGTFTS **(Seq ID 28)**, HAEGTFTSD **(Seq ID 29)** with the further option that one or more of these amino acids may be replaced by unnatural amino acids;

X_2 is selected from

GPSSGAPPPS **(Seq ID 18)** or

KELEKLL **(Seq ID 19)**or

GPPS **(Seq ID 20)**or

VKGR **(Seq ID 21)**or

a dipeptide, selected from combination of two amino acids, consisting of natural or unnatural amino acids, having a side chain containing an arylalkyl or heteroarylalkyl moieties selected from benzyl, napthylmethyl, pyridylmethyl, thienylmethyl, furylmethyl, imidazolylmethyl, isooxazolylmethyl, quinolylmethyl, benzofuranylmethyl, benzothienylmethyl, indolinylmethyl, indolylmethyl, dibenzofuranylmethyl, dibenzothienylmethyl, benzodihydrofuranylmethyl, benzodihydrothienylmethyl, thienopyrimidylmethyl, benzimidazolylmethyl, phenanthrenylmethyl, dihydrophenanthrenylmethyl, fluorenylmethyl, dibenzofuranylmethyl, dibenzothiophenyl methyl groups and the like, where each of these groups may be optionally substituted with (C_1-C_6)alkyl group such as methyl, ethyl, propyl, isopropyl, n-butyl, iso-butyl, t-butyl, pentyl, isopentyl, hexyl groups and the like, (C_1-C_6)alkoxy group such as methoxy, ethoxy, propoxy, butoxy, pentoxy, hexanoxy groups, cyano, halo group such as chloro, bromo, iodo, fluoro groups, hydroxy or optionally substituted aryl or heteroaryl groups selected from phenyl, napthyl, pyridyl, thienyl, furyl, imidazolyl, isooxazolyl, quinolyl, benzofuranyl, benzothienyl, indolinyl, indolyl, dibenzofuranyl, dibenzothienyl, benzodihydrofuranyl, benzodihydrothienyl, thienopyrimidyl, benzimidazolyl, phenanthrenyl, dihydrophenanthrenyl, fluorenyl, dibenzofuranyl, dibenzothiophenyl and the like, with the further provision that such aryl or heteroaryl substituents may further be optionally substituted with (C_1-C_6)alkyl, (C_1-C_6)alkoxy, cyano, halo, hydroxy or aryl or heteroaryl groups.

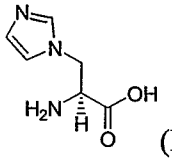
In a preferred embodiment, the dipeptide sequence may comprise of one or more amino acids selected from Bip, Bip(2-Me), Bip(2-Et), Bip(2-Ipr), Bip(2-CN), Bip(2'-Et-4'-OMe), Bip(4'-fluoro), Bip(4'-Phenyl), 2-(9,10-Dihydro-phenanthrenyl]-

Ala, 2-(Phenanthrenyl)-Ala, 4-(2-Naphthyl)-Phe, 4-(1-Naphthyl)-Phe, 2-Fluorenyl-Ala, 4-dibenzofuran-Phe, 4-dibenzothiophene-Phe, 4-(2'-methylphenyl)-3-pyridylalanine;

The term 'natural amino acids' indicates all those twenty amino acids, which are present in nature.

The term 'unnatural amino acids' or 'non-natural amino acids' represents either replacement of L-amino acids with corresponding D-amino acids such as replacement of L-Ala with D-Ala or L-Pro with D-Pro and the like or suitable modifications of the L or D amino acids, amino alkyl acids, either by

- α-alkylation such as substitution of Ala with α-methyl Ala (Aib), replacement of Phe with α-methyl Phe, replacement of substituted Bip with with α-methyl Bip;
- N-alkylation with groups selected from (C_1-C_6)alkyl or (C_3-C_6)cycloalkyl groups;
- modification of side chain such as replacement of His with histidine analogs such as 1-imidazolyl-alanine (II) or des-amino-His,

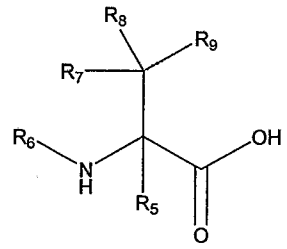


(II)

or replacement of phenyl ring of Phe with pyridyl, napthyl, biphenyl groups;

- substitution on the side chain of amino acid such as substitution of aromatic amino acid side chain with halogen, (C_1-C_3)alkyl, aryl groups, more specifically the replacement of Phe with 2 & 4-halo Phe;

Such 'unnatural amino acids' or 'non-natural amino acids' may be represented generally by the following structure:

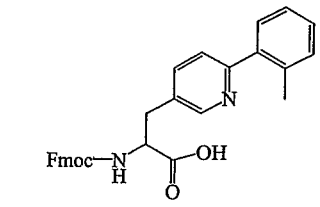


(IIa)

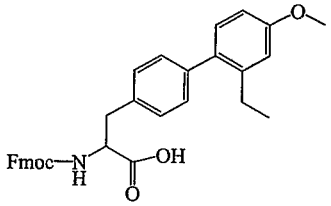
wherein R_5 is selected from H, F, (C_1-C_5) alkyl, the stereochemical configuration at the carbon bearing R_5 may be (R) or (S); R_6 is selected from H or (C_1-C_3) alkyl; each of R_7 and R_8 is independently selected from H, (C_1-C_3) alkyl, such as methyl and ethyl or halogen atom, preferably fluorine atom; R_9 represents groups, selected from (C_1-C_5) alkyl, aryl or heteroryl moieties selected from phenyl, napthyl, pyridyl, thienyl, furyl,

imidazolyl, isooxazolyl, quinolyl, benzofuranyl, benzothienyl, indolinyl, indolyl, dibenzofuranyl, dibenzothienyl, benzodihydrofuranyl, benzodihydrothienyl, thienopyrimidyl, benzimidazolyl, phenanthrenyl, dihydrophenanthrenyl, fluorenyl, dibenzofuranyl, dibenzothiophenyl groups, where each of these groups may be optionally substituted with (C_1-C_6)alkyl, (C_1-C_6)alkoxy, cyano, halo, hydroxy or optionally substituted aryl or heteroaryl groups, with the further provision that such aryl or heteroaryl substituents may further be optionally substituted with (C_1-C_6)alkyl, (C_1-C_6)alkoxy, cyano, halo, hydroxy or aryl or heteroaryl groups.

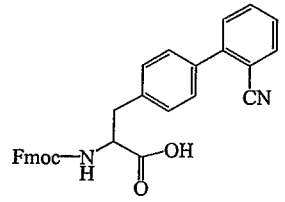
List of Fmoc protected Bip analogs used for the synthesis of GLP-1 peptidomimetics



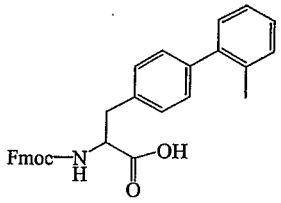
Fmoc-4-(2'-methylphenyl)-3-pyridylalanine-OH



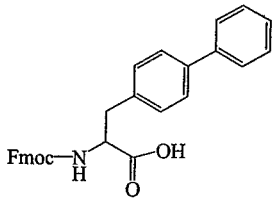
Fmoc-Bip(2'-Et- 4'-OMe)-OH



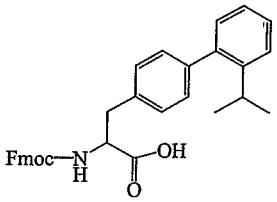
Fmoc-Bip(2-CN)-OH



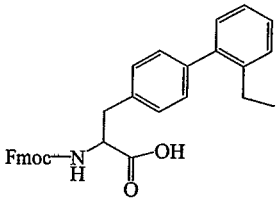
Fmoc-Bip(2-Me)-OH



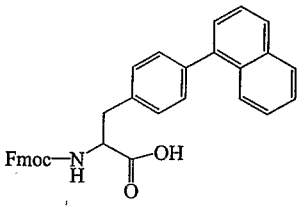
Fmoc-Bip-OH



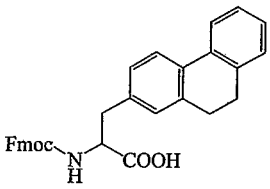
Fmoc-Bip(2-Ipr)-OH



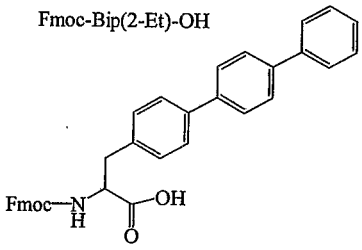
Fmoc-Bip(2-Et)-OH



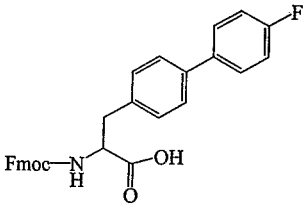
Fmoc-4-(1-Naphthyl)-Phe-OH



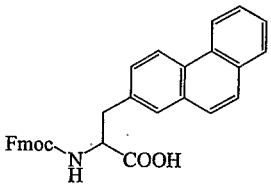
Fmoc-2-(9,10-Dihydro-phenanthrenyl]-Ala-OH



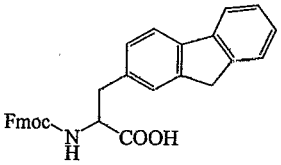
Fmoc-Bip(4-Ph)-OH



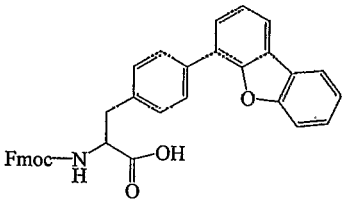
Fmoc-Bip(4-F)-OH



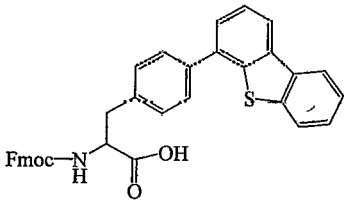
Fmoc-2-(Phenanthrenyl)-Ala-OH



Fmoc-2-Fluorenyl-Ala-OH



Fmoc-4-dibenzofuran-Phe-OH



Fmoc-4-dibenzothiophene-Phe-OH

The suitable substituents include, but are not limited to the following radicals, alone or in combination with other radicals – hydroxyl, oxo, halo, thio, nitro, amino, cyano, alkyl, haloalkyl, alkoxy, haloalkoxy, cycloalkyl, aryl, aryloxy, aralkyl, aralkoxy,

heteroaryl, heteroaralkyl, heteroaryloxy, heteroaralkoxy, acyl, acyloxy, carboxylic acid and its derivatives such as esters and amides;

The various groups, radicals and substituents used anywhere in the specification are described in the following paragraphs.

The term "alkyl" used herein, either alone or in combination with other radicals, denotes a linear or branched radical containing one to ten carbons, such as methyl, ethyl, *n*-propyl, *iso*-propyl, *n*-butyl, *sec*-butyl, *tert*-butyl, amyl, *t*-amyl, *n*-pentyl, *n*-hexyl, *iso*-hexyl, heptyl, octyl, decyl and the like.

The term "cycloalkyl" used herein, either alone or in combination with other radicals, denotes a radical containing three to seven carbons, such as cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl and the like.

The term "aryl" or "aromatic" used herein, either alone or in combination with other radicals, denotes an aromatic system containing one, two or three rings wherein such rings may be attached together in a pendant manner or may be fused, such as phenyl, naphthyl, tetrahydronaphthyl, indane, biphenyl, and the like.

The term 'arylalkyl" denotes an alkyl group, as defined above, attached to an aryl, such as benzyl, phenylethyl, naphthylmethyl, and the like. The term "aryloxy" denotes an aryl radical, as defined above, attached to an alkoxy group, such as phenoxy, naphthyloxy and the like, which may be substituted.

The term "aralkoxy" denotes an arylalkyl moiety, as defined above, such as benzyloxy, phenethyloxy, naphthylmethyloxy, phenylpropyloxy, and the like, which may be substituted.

The term "heteroaryl" or "heteroaromatic" used herein, either alone or in combination with other radicals, denotes an aromatic system containing one, two or three rings wherein such rings may be attached together in a pendant manner or may be fused containing one or more hetero atoms selected from O, N or S, such as pyridyl, thienyl, furyl, pyrrolyl, oxazolyl, thiazolyl, isothiazolyl, imidazolyl, isoxazolyl, oxadiazolyl, thiadiazolyl, triazolyl, tetrazolyl, benzopyranyl, benzopyranonyl, benzofuranyl, benzothienyl, indolinyl, indolyl, azaindolyl, azaindolinyl, benzodihydrofuranyl, benzodihydrothienyl, pyrazolopyrimidinyl, pyrazolopyrimidonyl, azaquinazolinyl, azaquinazolinoyl, pyridofuranyl, pyridothienyl, thienopyrimidyl, thienopyrimidonyl, quinolinyl, pyrimidinyl, pyrazolyl, quinazolinyl, quinazolonyl, pyrimidonyl, pyridazinyl, triazinyl, benzoxazinyl, benzoxazinonyl, benzothiazinyl, benzothiazinonyl, benzoxazolyl, benzothiazolyl, benzimidazolyl, benzotriazolyl,

phthalazynil, naphthylidinyl, purinyl, carbazolyl, phenothiazinyl, phenoxazinyl, and the like.

The term "heteroaralkyl" used herein, either alone or in combination with other radicals, denotes a heteroaryl group, as defined above, attached to a straight or branched saturated carbon chain containing 1 to 6 carbons, such as (2-furyl)methyl, (3-furyl)methyl, (2-thienyl)methyl, (3-thienyl)methyl, (2-pyridyl)methyl, 1-methyl-1-(2-pyrimidyl)ethyl and the like. The terms "heteroaryloxy", "heteroaralkoxy", "heterocycloxy denotes heteroaryl, heteroarylalkyl, groups respectively, as defined above, attached to an oxygen atom.

The term "acyl" used herein, either alone or in combination with other radicals, denotes a radical containing one to eight carbons such as formyl, acetyl, propanoyl, butanoyl, *iso*-butanoyl, pentanoyl, hexanoyl, heptanoyl, benzoyl and the like, which may be substituted.

The term "carboxylic acid" used herein, alone or in combination with other radicals, denotes a –COOH group, and includes derivatives of carboxylic acid such as esters and amides. The term "ester" used herein, alone or in combination with other radicals, denotes –COO- group, and includes carboxylic acid derivatives, where the ester moieties are alkoxycarbonyl, such as methoxycarbonyl, ethoxycarbonyl, and the like, which may be substituted.

Unless otherwise indicated, the term 'amino acid' as employed herein alone or as part of another group includes, without limitation, an amino group and a carboxyl group linked to the same carbon, referred to as 'α' carbon.

The absolute 'S' configuration at the 'α' carbon is commonly referred to as the 'L' or natural configuration. The 'R' configuration at the 'α' carbon is commonly referred to as the 'D' amino acid. In the case where both the 'α-substituents' is equal, such as hydrogen or methyl, the amino acids are Gly or Aib and are not chiral.

The term 'receptor modulator' refers to a compound that acts at the GLP-1 receptor to alter its ability to regulate downstream signaling events. Example of receptor modulators includes agonist, partial agonist, inverse agonist, allosteric potentiators.

Preferably, the isolated peptidomimetics are a 3-30 mer and such peptide bind to and activates the GLP-1 receptor.

In accordance with the present invention, the synthetic isolated peptidomimetics described herein possess the ability to mimic the biological activity of GLP-1 peptide,

with preference for agonist activity at GLP-1R. These synthetic peptidomimetics GLP-1 mimetic exhibit desirable in-vivo properties, thus making them ideal therapeutic candidates for oral or parenteral administration.

The present invention provides for compounds of formula (I) pharmaceutical compositions employing such compounds either alone or in combination and for methods of using such compounds. In particular, the present invention provides a pharmaceutical composition comprising a therapeutically effective amount of a compound of formula (I), alone or in combination(s), with a pharmaceutically acceptable carrier.

Further provided is a method for treating or delaying the progression or onset of diabetes, especially type II diabetes, including complications of diabetes, including retinopathy, neuropathy, nephropathy and delayed wound healing and related diseases such as insulin resistance (impaired glucose homeostasis), hyperglycemia, hyperinsulinemia, elevated blood levels of fatty acids or glycerol, obesity, hyperlipidemia including hypertriglyceridemia, syndrome X, atherosclerosis and hypertension, wherein a therapeutically effective amount of a compound of formula (I) or their combination(s) are administered to a mammal, example, human, a patient in need of treatment.

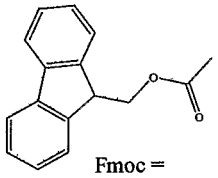
Several synthetic routes can be employed to prepare the compounds of the present invention well known to one skilled in the art of peptide synthesis. The compounds of formula (I), where all symbols are as defined earlier can be synthesized using the methods described below, together with conventional techniques known to those skilled in the art of peptide synthesis, or variations thereon as appreciated by those skilled in the art. Referred methods include, but not limited to those described below.

The peptidomimetics thereof described herein may be produced by chemical synthesis using suitable variations of various solid-phase techniques generally known such as those described in G. Barany & R. B. Merrifield, "The peptides: Analysis, synthesis, Biology"; Volume 2- "Special methods in peptide synthesis, Part A", pp. 3-284, E. Gross & J. Meienhofer, Eds., Academic Press, New York, 1980; and in J. M. Stewart and J. D. Young, "Solid-phase peptide synthesis" 2nd Ed., Pierce chemical Co., Rockford, Il, 1984.

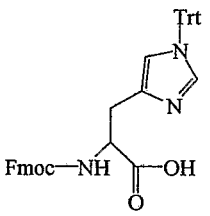
The preferred strategy for preparing the peptidomimetics of this invention is based on the use of Fmoc-based SPPS approach, wherein Fmoc (9-Fluorenyl-methyl-methyloxycarbonyl) group is used for temporary protection of the α-amino group, in

combination with the acid labile protecting groups, such as t-butyloxy carbonyl (Boc), tert-butyl (Bu^t), Trityl (Trt) group for temporary protection of the amino acid side chains (see for example E. Atherton & R.C. Sheppard, "The Fluorenylmethoxycarbonyl amino protecting group", in "The peptides: Analysis, synthesis, Biology"; Volume 9 - "Special methods in peptide synthesis, Part C", pp. 1-38, S. Undenfriend & J. Meienhofer, Eds., Academic Press, San Diego, 1987).

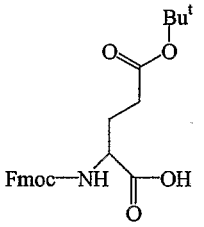
Examples of orthogonally protected amino acids used in Fmoc-solid phase peptide synthesis for the synthesis of peptidomimetics



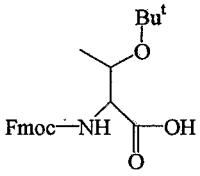
Fmoc =



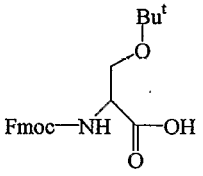
Fmoc-His(Trt)-OH



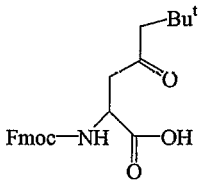
Fmoc-Glu(Bu^t)-OH



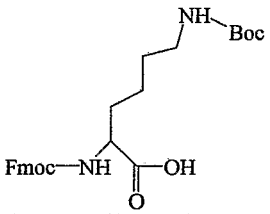
Fmoc-Thr(Bu^t)-OH



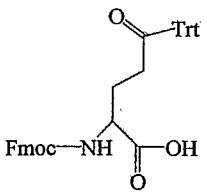
Fmoc-Ser(Bu^t)-OH



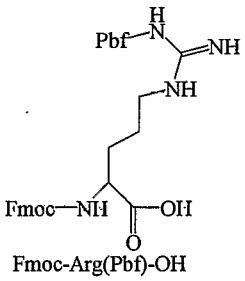
Fmoc-Asp(Bu^t)-OH



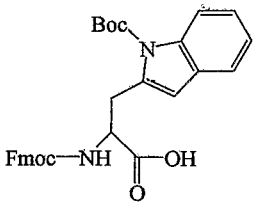
Fmoc-Lys(Boc)-OH



Fmoc-Gln(Trt)-OH



Fmoc-Arg(Pbf)-OH



Fmoc-Trp(Boc)-OH

The peptidomimetics can be synthesized in a stepwise manner on an insoluble polymer support (resin), starting form the C-terminus of the peptide. In an embodiment, the synthesis is initiated by appending the C-terminal amino acid of the peptide to the resin through formation of an amide, ester or ether linkage. This allows the eventual

release of the resulting peptide as a C-terminal amide, carboxylic acid or alcohol, respectively.

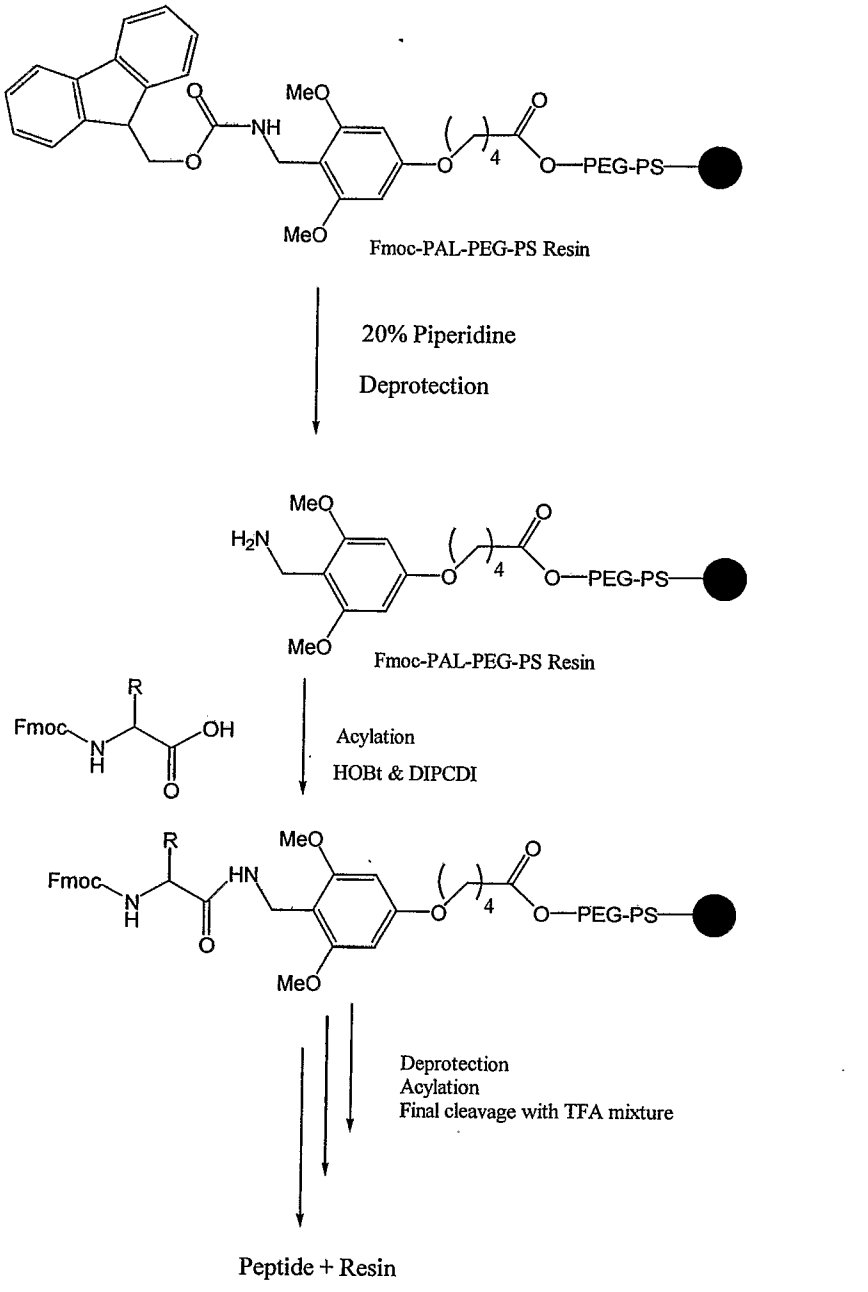
In the Fmoc-based SPPS, the C-terminal amino acid and all other amino acids used in the synthesis are required to have their α-amino groups and side chain functionalities (if present) differentially protected (orthogonal protection), such that the α-amino protecting group may be selectively removed during the synthesis, using suitable base such as 20% piperidine solution, without any premature cleavage of peptide from resin or deprotection of side chain protecting groups, usually protected with the acid labile protecting groups.

The coupling of an amino acid is performed by activation of its carboxyl group as an active ester and reaction thereof with unblocked α-amino group of the N-terminal amino acid appended to the resin. After every coupling and deprotection, peptidyl-resin was washed with the excess of solvents, such as DMF, DCM and diethyl ether. The sequence of α-amino group deprotection and coupling is repeated until the desired peptide sequence is assembled. The peptide is then cleaved from the resin with concomitant deprotection of the side chain functionalities, using an appropriate cleavage mixture, usually in the presence of appropriate scavengers to limit side reactions. The resulting peptide is finally purified by reverse phase HPLC.

The synthesis of the peptidyl-resins required as precursors to the final peptides utilizes commercially available cross-linked polystyrene polymer resins (Novabiochem, San Diego, CA). Preferred for use in this invention are Fmoc-PAL-PEG-PS resin, 4-(2', 4'-dimethoxyphenyl-Fmoc-aminomethyl)-phenoxyacetyl-*p*-methyl benzhydrylamine resin (Fmoc-Rink amide MBHA resin), 2-chloro-Trityl-chloride resin or *p*-benzyloxybenzyl alcohol resin (HMP resin) to which the C-terminal amino acid may or may not be already attached. If the C-terminal amino acid is not attached, its attachment may be achieved by HOBt active ester of the Fmoc-protected amino acid formed by its reaction with DIPCDI. In case of 2-Chloro-trityl resin, coupling of first Fmoc-protected amino acid was achieved, using DIPEA. For the assembly of next amino acid, N-terminal protection of peptidyl resin was selectively deprotected using a solution of 10-20 % piperidine solution. After every coupling and deprotection, excess of amino acids and coupling reagents was removed by washed with a DMF, DCM and ether. Coupling of the subsequent amino acids can be accomplished using HOBt or HOAT active esters produced from DIPCDI/ HOBt or DIPCDI/HOAT, respectively. In case of some difficult coupling, especially coupling of those amino acids, which are hydrophobic or

amino acids with bulky side chain protections, complete coupling can be achieved using a combination of highly efficient coupling agents such as HBTU, PyBOP or TBTU, with additives such as DIPEA.

General Scheme for Fmoc-Based SPPS:



The synthesis of the peptide analogs described herein can be carried out by using batchwise or continuos flow peptide synthesis apparatus. The non-natural non-commercial amino acids present at different position were incorporated into the peptide chain, using one or more methods known in the art. In one approach, a Fmoc-protected non-natural amino acid was prepared in solution, using appropriate literature procedures. For example, the Fmoc-protected Bip analogs, described above, were prepared using modified Suzuki cross coupling method, as known in literature (for e.g. Tetrahedron Letter 58, 9633-9695, 2002). The Fmoc-protected α-methylated amino acids were prepared using asymmetric Strecker synthesis, as described for e.g. in Org. Letters 3(8), 1121-1124, 2001. The Fmoc-protected N-methylated amino acids were prepared using a literature method as described in for e.g. JOC, 2005, 70, 6918-6920. The resulting derivative was then used in the step-wise synthesis of the peptide. Alternatively, the required non-natural amino acid was built on the resin directly using synthetic organic chemistry procedures and a linear peptide chain were build.

The peptide-resin precursors for their respective peptidomimetics may be cleaved and deprotected using suitable variations of any of the standard cleavage procedures described in the literature (see, for example, D. S. King et al. Int. J. peptide Protein res. 36, 1990, 255 - 266). A preferred method for use in this invention is the use of TFA cleavage mixture, in the presence of water and TIPS as scavengers. Typically, the peptidyl-resin was incubated in TFA / Water /TIPS (94:3:3; V: V: V; 10 ml / 100 mg of peptidyl resin) for 1.5-2 hrs at room temperature. The cleaved resin is then filtered off, the TFA solution is concentrated or dried under reduced pressure. The resulting crude peptide is either precipitated or washed with Et_2O or is re-dissolved directly into DMF or 50 % aqueous acetic acid for purification by preparative HPLC.

Peptidomimetics with the desired purity can be obtained by purification using preparative HPLC. The solution of crude peptide is injected into a semi-Prep column (Luna 10μ; C_{18}; 100 Å), dimension 250 X 50 mm and eluted with a linear gradient of ACN in water, both buffered with 0.1 % TFA, using a flow rate of 15 -50 ml /min with effluent monitoring by PDA detector at 220 nm. The structures of the purified peptidomimetics can be confirmed by Electrospray Mass Spectroscopy (ES-MS) analysis.

All the peptide prepared were isolated as trifluoro-acetate salt, with TFA as a counter ion, after the Prep-HPLC purification. However, some peptides were subjected for desalting, by passing through a suitable ion exchange resin bed, preferably through anion-exchange resin

Dowex SBR P(Cl) or an equivalent basic anion-exchange resin. In some cases, TFA counter ions were replaced with acetate ions, by passing through suitable ion-exchange resin, eluted with dilute acetic acid solution. For the preparation of the hydrochloride salt of peptides, in the last stage of the manufacturing, selected peptides, with the acetate salt was treated with 4 M HCl. The resulting solution was filtered through a membrane filter (0.2 μm) and subsequently lyophilized to yield the white to off-white HCl salt. Following similar techniques and/or such suitable modifications, which are well within the scope of persons skilled in the art, other suitable pharmaceutically acceptable salts of the peptidomimetics of the present invention were prepared.

In a preferred embodiment, the present invention provides a method of making a peptidomimetics that mimics the activity of an endogenous polypeptide GLP-1R agonist. In another preferred embodiment, the polypeptide receptor agonist is GLP-1.

The novel compounds of the present invention can be formulated into suitable pharmaceutically acceptable compositions by combining with suitable excipients as are well known.

The pharmaceutical composition is provided by employing conventional techniques. Preferably the composition is in unit dosage form containing an effective amount of the active component, that is, the compounds of formula (I) either alone or combination, according to this invention.

The quantity of active component, that is, the compounds of formula (I) according to this invention, in the pharmaceutical composition and unit dosage form thereof may be varied or adjusted widely depending upon the particular application method, the potency of the particular compound and the desired concentration. By way of guidance, the daily oral dosage of the active ingredient, when used for the indicated effects, will range between about 0.001 to 1000 mg/kg of body weight, preferably between about 0.01 to 100 mg/kg of body weight per day and most preferably between about 0.6 to 20 mg/kg/day.

General method of preparation of peptidomimetics, using SPPS approach:

Assembly of peptidomimetics on resin:

Sufficient quantity (50–100 mg) of Fmoc-PAL-PEG-PS resin or Fmoc-Rink amide MBHA resin, loading: 0.5-0.6 mmol / g was swelled in DMF (1-10 ml /100 mg of resin) for 2-10 minutes. The Fmoc-group on resin was then removed by incubation of resin with 10-30 % piperidine in DMF (10-30 ml / 100 mg of resin), for 10-30 minutes. Deprotected resin was filtered and washed excess of DMF, DCM and ether (50 ml X 4). Washed resin was incubated in freshly distilled DMF (1 ml / 100 mg of

resin), under nitrogen atmosphere for 5 minutes. A 0.5 M solution of first Fmoc-protected amino acid (1-3 eq.), pre-activated with HOBt (1-3 eq.) and DIPCDI (1-2 eq.) in DMF was added to the resin, and the resin was then shaken for 1-3 hrs, under nitrogen atmosphere. Coupling completion was monitored using a qualitative ninhydrin test. After the coupling of first amino acid, the resin was washed with DMF, DCM and Diethyl ether (50 ml X 4). For the coupling of next amino acid, firstly, the Fmoc-protection on first amino acid, coupled with resin was deprotected, using a 10-20% piperidine solution, followed by the coupling the Fmoc-protected second amino acid, using a suitable coupling agents, and as described above. The repeated cycles of deprotection, washing, coupling and washing were performed until the desired peptide chain was assembled on resin, as per general scheme above.

Finally, the Fmoc-protected peptidyl-resin prepared above was deprotected by 20% piperidine treatment as described above and the peptidyl-resins were washed with DMF, DCM and Diethyl ether (50 ml X 4). Resin containing desired peptide was dried under nitrogen pressure for 10-15 minutes and subjected for cleavage/ deprotection.

Cleavage and deprotection:

The desired peptidomimetics were cleaved and deprotected from their respective peptidyl-resins by treatment with TFA cleavage mixture as follows. A solution of TFA / Water / Triisopropylsilane (95: 2.5: 2.5) (10 ml / 100 mg of peptidyl-resin) was added to peptidyl-resins and the mixture was kept at room temperature with occasional starring. The resin was filtered, washed with a cleavage mixture and the combined filtrate was evaporated to dryness. Residue obtained was dissolved in 10 ml of water and the aqueous layer was extracted 3 times with ether (20 ml each) and finally the aqueous layer was freeze-dried. Crude peptide obtained after freeze-drying was purified by preparative HPLC as follows:

Preparative HPLC purification of the crude peptidomimetics:

Preparative HPLC was carried out on a Shimadzu LC-8A liquid chromatograph. A solution of crude peptide dissolved in DMF or water was injected into a semi-Prep column (Luna 10μ; C_{18}; 100 A^0), dimension 250 X 50 mm and eluted with a linear gradient of ACN in water, both buffered with 0.1 % TFA, using a flow rate of 15 -50 ml / min, with effluent monitoring by PDA detector at 220 nm. A typical gradient of 20 % to 70 % of water-ACN mixture, buffered with 0.1 % TFA was used, over a period of 50 minutes, with 1% gradient change per minute. The desired product eluted were

collected in a single 10-20 ml fraction and pure peptidomimetics were obtained as amorphous white powders by lyophilisation of respective HPLC fractions.

HPLC analysis of the purified peptidomimetics

After purification by preparative HPLC as described above, each peptide was analyzed by analytical RP-HPLC on a Shimadzu LC-10AD analytical HPLC system. For analytic HPLC analysis of peptidomimetics, Luna 5μ; C_{18}; 100 A°, dimension 250 X 4.6 mm column was used, with a linear gradient of 0.1% TFA and ACN buffer and the acquisition of chromatogram was carried out at 220 nm, using a PDA detector.

Characterization by Mass Spectrometry

Each peptide was characterized by electrospray ionisation mass spectrometry (ESI-MS), either in flow injection or LC/MS mode. Triple quadrupole mass spectrometers (API-3000 (MDS-SCIES, Canada) was used in all analyses in positive and negative ion electrospray mode. Full scan data was acquired over the mass range of quadrupole, operated at unit resolution. In all cases, the experimentally measured molecular weight was within 0.5 Daltons of the calculated monoisotopic molecular weight. Quantification of the mass chromatogram was done using Analyst 1.4.1 software.

Utilizing the synthetic methods described herein along with other commonly known techniques and suitable variations thereof, the following GLP-1 peptidomimetics were prepared. This list is indicative of the various groups of peptidomimetics, which can be prepared according to the present invention, and are expected to at least include obvious variations of these compounds. However, such disclosure should not be construed as limiting the scope of the invention in any way.

Table 1:

S. No.	Sequence
1	HGEGTFTSD-$(CH_2)_3$-GPSSGAPPPS
2	HGEGTFTSD-$(CH_2)_4$-GPSSGAPPPS
3	HGEGTFTSD-$(CH_2)_5$-GPSSGAPPPS
4	HGEGTFTSD-$(CH_2)_6$-GPSSGAPPPS
5	HGEGTFTSD-$(CH_2)_7$-GPSSGAPPPS
6	HGEGTFTSD-$(CH_2)_{10}$-GPSSGAPPPS
7	HGEGTFTSD-$(CH_2)_{11}$-GPSSGAPPPS

8	HGEGTFTSDLSKQM-$(CH_2)_3$-GPSS
9	HGEGTFTSDLSKQM-$(CH_2)_4$-GPSS
10	HGEGTFTSDLSKQM-$(CH_2)_5$-GPSS
11	HGEGTFTSDLSKQM-$(CH_2)_6$-GPSS
12	HGEGTFTSDLSKQM-$(CH_2)_7$-GPSS
13	HGEGTFTSDLSKQM-$(CH_2)_{10}$-GPSS
14	HGEGTFTSDLSKQM-$(CH_2)_{11}$-GPSS
15	HGEGTFTSDLSKQME-G-GPSSGAPPPS
16	HGEGTFTSDLSKQME-$(CH_2)_2$-GPSSGAPPPS
17	HGEGTFTSDLSKQME-$(CH_2)_3$-GPSSGAPPPS
18	HGEGTFTSDLSKQME-$(CH_2)_4$-GPSSGAPPPS
19	HGEGTFTSDLSKQME-$(CH_2)_5$-GPSSGAPPPS
20	HGEGTFTSDLSKQME-$(CH_2)_6$-GPSSGAPPPS
21	HGEGTFTSDLSKQME-$(CH_2)_7$-GPSSGAPPPS
22	HGEGTFTSDLSKQME-$(CH_2)_{10}$-GPSSGAPPPS
23	HGEGTFTSDLSKQME-$(CH_2)_{11}$-GPSSGAPPPS

Table 2:

S. No.	**Sequence**
1	HAEGTFTSD-$(CH_2)_2$-VKGR
2	HAEGTFTSD-$(CH_2)_3$-VKGR
3	HAEGTFTSD-$(CH_2)_4$-VKGR
4	HAEGTFTSD-$(CH_2)_5$-VKGR
5	HAEGTFTSD-$(CH_2)_6$-VKGR
6	HAEGTFTSD-$(CH_2)_{10}$-VKGR
7	HAibEGTFTSD-$(CH_2)_2$-VKGR
8	HAibEGTFTSD-$(CH_2)_3$-VKGR
9	HAibEGTFTSD-$(CH_2)_4$-VKGR
10	HAibEGTFTSD-$(CH_2)_5$-VKGR
11	HAibEGTFTSD-$(CH_2)_6$-VKGR

12	HAibEGTFTSD-$(CH_2)_{10}$-VKGR

Table 3:

S. No.	Sequence
1	HGEGTFTSDLSKQMKELEKLL
2	HAEGTFTSDKELEKLL
3	HGEGTFTSDKELEKLL
4	HAibEGTFTSDGKELEKLL
5	HGEGTFTSDGKELEKLL
6	HGEGTFTSDVSKELEKLL
7	HAEGTFTSDVSKELEKLL
8	HAEGTFTSDVSEKELEKLL
9	HAEGTFTSDVSGKELEKLL
10	HAEGTFTSDVSSYLEKELEKLL
11	HAEGTFTSDVSSYLEGKELEKLL
12	HGEGTFTSDVSSYLEGKELEKLL
13	HaEGTFTSDVSSYLEGKELEKLL
14	HAibEGTFTSDVSSYLEGKELEKLL
15	HAEGTFTSDVSSYLEGKELEKLLVKG
16	HAEGTFTSDVSSYLEPKELEKLL
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19	HAibEGTFTSDVSSYLEGQAAKEFIKELEKLL
20	HAibEGT-(α-Me)Phe(2-F)-TSDVSSYLEGQAAKEFIKELEKLL
21	Des-amino-HAibEGT-(α-Me)Phe(2-F)-TSDVSSYLEGQAAKEFIKELEKLL
22	HAEGTFTSD-$(CH_2)_3$-KELEKLL
23	HAEGTFTSD-$(CH_2)_4$-KELEKLL
24	HAEGTFTSD-$(CH_2)_5$-KELEKLL
25	HAEGTFTSD-$(CH_2)_6$-KELEKLL
26	HA-$(CH_2)_3$-DVSSYLEGQAAKEFIKELEKLL

27	HAib-$(CH_2)_3$-DVSSYLEGQAAKEFIKELEKLL
28	HAibEGTFTSDVSSYLEGQ-$(CH_2)_2$-KELEKLL
29	HAibEGTFTSDVSSYLEGQ-$(CH_2)_3$-KELEKLL
30	HAibEGTFTSDVSSYLE-$(CH_2)_2$-FIKELEKLL

Table 4:

S. No.	Sequence
1	HGEGTFTSD-$(CH_2)_3$-Bip-Bip
2	HAibEGTFTSD-$(CH_2)_3$-Bip-Bip
3	HAibEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_3$-Bip-Bip
4	HAEGTFTSD-G-Bip(2-Me)-Bip(2-Me)
5	HAibEGTFTSD-G-Bip(2-Me)-Bip(2-Me)
6	HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Me)-Bip(2-Me)
7	HAEGTFTS-G-Bip(2-Me)-Bip(2-Me)
8	HAibEGTFTS-G-Bip(2-Me)-Bip(2-Me)
9	HAibEGT-(α-Me)-Phe(2-F)-TS-G-Bip(2-Me)-Bip(2-Me)
10	HAEGTFTS-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
11	HAibEGTFTS-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
12	HAibEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
13	HAEGTFT-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
14	HAibEGTFT-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
15	HAibEGT-(α-Me)-Phe(2-F)-T-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
16	HAEGTF-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
17	HAibEGTF-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
18	HAibEGT-(α-Me)-Phe(2-F)-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
19	HAEGT-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
20	HAibEGT-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
21	HAEG-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
22	HAibEG-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
23	HAEGTFTSD-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
24	HAibEGTFTSD-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

25	HAibEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
26	HAEGTFTSD-G-Bip-Bip(2-Me)
27	HAibEGTFTSD-G-Bip-Bip(2-Me)
28	HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip-Bip(2-Me)
29	HAEGTFTSD-G-Bip(2-Me)-Bip
30	HAibEGTFTSD-G-Bip(2-Me)-Bip
31	HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Me)-Bip
32	HAEGTFTSD-G-Bip-Bip
33	HAibEGTFTSD-G-Bip-Bip
34	HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip-Bip
35	HAEGTFTSD-G-Bip-Bip(2-Et)
36	HAibEGTFTSD-G-Bip-Bip(2-Et)
37	HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip-Bip(2-Et)
38	HAEGTFTSD-G-Bip(2-Et)-Bip(2-Et)
39	HAibEGTFTSD-G-Bip(2-Et)-Bip(2-Et)
40	HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Et)-Bip(2-Et)
41	HAEGTFTSD-G-Bip(2-Et)-Bip
42	HAibEGTFTSD-G-Bip(2-Et)-Bip
43	HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Et)-Bip
44	HAEGTFTSD-G-Bip(2-Et)-Bip(2-Me)
45	HAibEGTFTSD-G-Bip(2-Et)-Bip(2-Me)
46	HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Et)-Bip(2-Me)
47	HAEGTFTSD-G-Bip(2-Me)-Bip(2-Et)
48	HAibEGTFTSD-G-Bip(2-Me)-Bip(2-Et)
49	HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Me)-Bip(2-Et)
50	HGEGTFTSD-G-Bip(2-Me)-Bip(2-Me)
51	HGEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Me)-Bip(2-Me)
52	HGEGTFTSD-G-Bip(2-Et)-Bip(2-Et)
53	HGEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Et)-Bip(2-Et)
54	HGEGTFTSD-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)
55	HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)
56	HGEGTFTSD-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)

57	HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)
58	HGEGTFTSD-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)
59	HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)
60	HGEGTFTSD-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)
61	HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)
62	HGEGTFTSD-$(CH_2)_{10}$-Bip(2-Me)-Bip(2-Me)
63	HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_{10}$-Bip(2-Me)-Bip(2-Me)
64	HGEGTFTSD-$(CH_2)_3$-Bip(2-Et)-Bip(2-Et)
65	HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_3$-Bip(2-Et)-Bip(2-Et)
66	HGEGTFTSD-$(CH_2)_4$-Bip(2-Et)-Bip(2-Et)
67	HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_4$-Bip(2-Et)-Bip(2-Et)
68	HGEGTFTSD-$(CH_2)_5$-Bip(2-Et)-Bip(2-Et)
69	HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_5$-Bip(2-Et)-Bip(2-Et)
70	HGEGTFTSD-$(CH_2)_6$-Bip(2-Et)-Bip(2-Et)
71	HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_6$-Bip(2-Et)-Bip(2-Et)
72	HGEGTFTSD-$(CH_2)_{10}$-Bip(2-Et)-Bip(2-Et)
73	HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_{10}$-Bip(2-Et)-Bip(2-Et)
74	HGEGTFTSD-$(CH_2)_{11}$-Bip(2-Et)-Bip(2-Et)
75	HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_{11}$-Bip(2-Et)-Bip(2-Et)
76	HGEGTFTS-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)
77	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)
78	HGEGTFTS-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)
79	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)
80	HGEGTFTS-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)
81	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)
82	HGEGTFTS-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)
83	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)
84	HGEGTFTS-$(CH_2)_{10}$-Bip(2-Me)-Bip(2-Me)
85	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_{10}$-Bip(2-Me)-Bip(2-Me)
86	HGEGTFTS-$(CH_2)_{11}$-Bip(2-Me)-Bip(2-Me)
87	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_{11}$-Bip(2-Me)-Bip(2-Me)
88	HGEGTFTS-$(CH_2)_3$-Bip(2-Et)-Bip(2-Et)

89	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_3$-Bip(2-Et)-Bip(2-Et)
90	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_4$-Bip(2-Et)-Bip(2-Et)
91	HGEGTFTS-$(CH_2)_4$-Bip(2-Et)-Bip(2-Et)
92	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_4$-Bip(2-Et)-Bip(2-Et)
93	HGEGTFTS-$(CH_2)_5$-Bip(2-Et)-Bip(2-Et)
94	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_5$-Bip(2-Et)-Bip(2-Et)
95	HGEGTFTS-$(CH_2)_6$-Bip(2-Et)-Bip(2-Et)
96	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_6$-Bip(2-Et)-Bip(2-Et)
97	HGEGTFTS-$(CH_2)_{10}$-Bip(2-Et)-Bip(2-Et)
98	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_{10}$-Bip(2-Et)-Bip(2-Et)
99	HGEGTFTS-$(CH_2)_{11}$-Bip(2-Et)-Bip(2-Et)
100	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_{11}$-Bip(2-Et)-Bip(2-Et)
101	HGEGTFTS-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
102	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
103	HGEGTFTS-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)
104	HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)
105	HAEGTFTS-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)
106	HAibEGTFTS-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)
107	HAibEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)
108	HGEGTFTSD-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)
109	HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)
110	HAEGTFTSD-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)
111	HAibEGTFTSD-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)
112	HAibEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)
113	HAEGTF-$(CH_2)_2$-Bip(2-Me)-Bip(2-Et)
114	HAibEGTF-$(CH_2)_2$-Bip(2-Me)-Bip(2-Et)
115	HAibEGT-(α-Me)-Phe(2-F)-$(CH_2)_2$-Bip(2-Me)-Bip(2-Et)
116	HAEGTFTSD-G-TrPh-TrPh
117	HAibEGTFTSD-G-TrPh-TrPh
118	HAibEGT-(α-Me)-Phe(2-F)-TSD-G-TrPh-TrPh
119	HAibEGT-(α-Me)-Phe(2-F)-$(CH_2)_2$-TrPh-TrPh
120	HAibEG-$(CH_2)_2$-TrPh-TrPh

121	HAibE-$(CH_2)_2$-TrPh-TrPh
122	HAib-$(CH_2)_3$-TrPh-TrPh
123	HAEGTFTSD-G-Nap-Nap
124	HAibEGTFTSD-G-Nap-Nap
125	HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Nap-Nap
126	HAEGTFTSD-G-Bip(2-F)-Bip(2-F)
127	HAibEGTFTSD-G-Bip(2-F)-Bip(2-F)
128	HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-F)-Bip(2-F)
129	HAEGTFTSD-G-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
130	HAibEGTFTSD-G-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
131	HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
132	HAEGTFTSD-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
133	HAibEGTFTSD-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
134	HAibEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
135	HAEGTFTS-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
136	HAibEGTFTS-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
137	HAibEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
138	HAEGTFT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
139	HAibEGTFT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
140	HAibEGT-(α-Me)-Phe(2-F)-T-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
141	HAEGTF-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
142	HAibEGTF-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
143	HAibEGT-(α-Me)-Phe(2-F)-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
144	HAEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
145	HAibEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
146	HAEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

147	HAibEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
148	HAEG-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala
149	HAibEG-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

Table 5:

S. No.	Sequence
1	HAEGT-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
2	HGEGT-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)
3	HGEGT-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)
4	HGEGT-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)
5	HGEGT-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)
6	HAEGT-$(CH_2)_2$-Bip(2-Me)-DBip(2-Me)
7	HAEGT-$(CH_2)_2$-DBip(2-Me)-Bip(2-Me)
8	HaEGT-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
9	HGEG-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)
10	HAEG-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)
11	HGEG-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)
12	HGEG-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)
13	HGEG-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)
14	HAEG-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)
15	HAEG-$(CH_2)_3$-Bip(2-Me)-DBip(2-Me)
16	HAEG-$(CH_2)_4$-Bip(2-Me)-DBip(2-Me)
17	HAEG-$(CH_2)_5$-Bip(2-Me)-DBip(2-Me)
18	HGEG-$(CH_2)_5$-DBip(2-Me)-Bip(2-Me)
19	HAE-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)
20	HAE-$(CH_2)_3$-Bip(2-Me)-DBip(2-Me)
21	HAE-$(CH_2)_2$-D-Bip(2-Me)-Bip(2-Me)
22	HAE-$(CH_2)_3$-D-Bip(2-Me)-Bip(2-Me)
23	HAE-$(CH_2)_4$-D-Bip(2-Me)-Bip(2-Me)
24	HAE-$(CH_2)_4$-Bip(2-Me)-DBip(2-Me)
25	HAE-$(CH_2)_5$-D-Bip(2-Me)-Bip(2-Me)
26	HAE-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)

27	HAE-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

Table 6:

S. No.	Sequence
1	H-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)
2	H-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)
3	H-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)
4	H-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)
5	H-$(CH_2)_4$-Bip(2-Et)-Bip(2-Me)
6	H-$(CH_2)_5$-Bip(2-Et)-Bip(2-Me)
7	H-$(CH_2)_6$-Bip(2-Et)-Bip(2-Me)
8	H-$(CH_2)_{10}$-Bip(2-Et)-Bip(2-Me)
9	H-$(CH_2)_5$-Bip(2-Me)-DBip(2-Me)
10	H-$(CH_2)_5$-DBip(2-Me)-Bip(2-Me)
11	H-$(CH_2)_5$-DBip(2-Me)-DBip(2-Me)
12	HG-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)
13	HG-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)
14	HG-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)
15	HG-$(CH_2)_4$-Bip(2-Et)-Bip(2-Me)
16	HG-$(CH_2)_3$-Bip(2-Et)-DBip(2-Me)
17	HG-$(CH_2)_3$-Bip(2-Me)-DBip(2-Me)
18	FA-$(CH_2)_3$-DBip(2-Me)-Bip(2-Et)
19	FA-$(CH_2)_3$-DBip-DBip
20	Ha-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)
21	Ha-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)
22	Ha-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)
23	Ha-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)
24	Ha-$(CH_2)_3$-Bip(2-Et)-DBip(2-Me)
25	Ha-$(CH_2)_3$-Bip(2-Me)-DBip(2-Me)
26	Ha-$(CH_2)_3$-Bip(2-Et)-DBip(2-Et)
27	Ha-$(CH_2)_3$-Bip(2-Me)-Bip
28	Ha-$(CH_2)_3$-(N(Me))-DBip(2-Me)-Bip(2-Et)

29	Ha-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Me)
30	Ha-$(CH_2)_3$-(N(Me))-DBip-Bip(2-Et)
31	Ha-$(CH_2)_3$-DBip(2-Me)-Bip(2-Et)
32	HA-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)
33	HA-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)
34	HA-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)
35	HA-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)
36	HA-$(CH_2)_{10}$-Bip(2-Me)-Bip(2-Me)
37	HA-$(CH_2)_{11}$-Bip(2-Me)-Bip(2-Me)
38	HA-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)
39	HA-$(CH_2)_3$-Bip(2-Et)-DBip(2-Et)
40	HA-$(CH_2)_3$-DBip(2-Me)-DBip(2-Me)
41	HA-$(CH_2)_3$-DBip(2-Me)-Bip(2-Me)
42	HA-$(CH_2)_3$-Bip(2-Me)-DBip(2-Me)
43	HA-$(CH_2)_3$-Bip(2-Ipr)-Bip(2-Ipr)
44	HA-$(CH_2)_3$-Bip(2-Ipr)-Bip(2-Me)
45	HA-$(CH_2)_3$-Bip(2-Me)-Bip(2-Ipr)
46	HA-$(CH_2)_4$-Bip(2-Et)-Bip(2-Me)
47	HA-$(CH_2)_3$-Bip(2-Me)-DBip(2-Et)
48	HA-$(CH_2)_2$-Bip(2-Et)-Bip(2-Me)
49	HA-$(CH_2)_5$-Bip(2-Et)-Bip(2-Me)
50	HA-$(CH_2)_6$-Bip(2-Et)-Bip(2-Me)
51	HA-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
52	HA-$(CH_2)_3$-DBip(2-Et)-DBip(2-Me)
53	HA-$(CH_2)_3$-DBip(2-Et)-Bip(2-Me)
54	HA-$(CH_2)_2$-Bip(2-Me)-DBip(2-Me)
55	HA-$(CH_2)_3$-Bip(2-Et)-Bip(2-Et)
56	HA-$(CH_2)_3$-DBip(2-Et)-DBip(2-Et)
57	HA-$(CH_2)_3$-DBip(2-Et)-Bip(2-Et)
58	HA-$(CH_2)_3$-DBip(2-Me)-DBip(2-Et)
59	HA-$(CH_2)_3$-Bip(2-Me)-Bip(2-Et)
60	HA-$(CH_2)_3$-DBip(2-Me)-Bip(2-Et)
61	HA-$(CH_2)_3$-Bip-Bip

62	HA-$(CH_2)_3$-Bip-DBip
63	HA-$(CH_2)_3$-DBip-DBip
64	HA-$(CH_2)_3$-DBip-Bip
65	HA-$(CH_2)_3$-Bip-Bip(2-Me)
66	HA-$(CH_2)_3$-Bip(2-Me)-Bip
67	HA-$(CH_2)_3$-Bip(2-Et)-Bip
68	HA-$(CH_2)_3$-Bip-Bip(2-Et)
69	HA-$(CH_2)_3$-Bip(2-Ipr)-DBip(2-Ipr)
70	HA-$(CH_2)_3$-DBip(2-Ipr)-Bip(2-Ipr)
71	HA-$(CH_2)_3$-DBip(2-Ipr)-DBip(2-Ipr)
72	HA-$(CH_2)_3$-Bip(2-Me)-Bip(2-CN)
73	HA-$(CH_2)_3$-Bip-Bip(2-CN)
74	HA-$(CH_2)_3$-Bip(2-Et)-Bip(2-CN)
75	HA-$(CH_2)_3$-Bip(2-Ipr)-Bip(2-CN)
76	HA-$(CH_2)_3$-Bip(2-CN)-Bip(2-Me)
77	HA-$(CH_2)_3$-Bip(2-CN)-Bip
78	HA-$(CH_2)_3$-Bip(2-CN)-Bip(2-Et)
79	HA-$(CH_2)_3$-Bip(2-CN)-Bip(2-Ipr)
80	HA-$(CH_2)_3$-Bip(2-CN)-Bip(2-CN)
81	HA-$(CH_2)_2$-F-$(CH_2)_2$-Bip(2-Et)-DBip(2-Et)
82	HA-$(CH_2)_2$-F-$(CH_2)_2$-Bip(2-Et)-DBip(2-Me)
83	HA-$(CH_2)_5$-Bip(2-Me)-DBip
84	HA-$(CH_2)_3$-Bip(2-Me)-DBip-R
85	HA-$(CH_2)_3$-DBip(2-Me)-DBip
86	HA-$(CH_2)_5$-Bip(2-Me)-DBip(2-Me)
87	HA-$(CH_2)_5$-DBip(2-Me)-Bip(2-Me)
88	HA-$(CH_2)_4$-D(Bip)-Bip(2-Et)
89	HA-$(CH_2)_5$-D(Bip)-Bip(2-Et)
90	HA-$(CH_2)_4$-Bip(2-Me)-DBip(2-Me)
91	HA-$(CH_2)_5$-Bip(2-Me)-DBip(2-Me)
92	HA-$(CH_2)_3$-(N(Me))-DBip-Bip(2-Et)
93	HA-$(CH_2)_4$-DBip(2-Me)-Bip(2-Et)
94	HA-$(CH_2)_5$-DBip(2-Me)-Bip(2-Et)

95	HA-$(CH_2)_3$-(N(Me))-DBip(2-Me)-Bip(2-Et)
96	HA-$(CH_2)_4$-Bip(2-Me)-DBip
97	HA-$(CH_2)_5$-Bip(2-Me)-DBip
98	HA-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Me)
99	HA-(N(Me))-$(CH_2)_3$-DBip(2-Me)-Bip(2-Et)
100	HA-(N(Me))-$(CH_2)_3$-DBip-Bip(2-Et)
101	HA-(N(Me))-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)
102	HA-(N(Me))-$(CH_2)_3$-Bip(2-Me)-DBip
103	HAE-$(CH_2)_2$-F-$(CH_2)_2$-Bip(2-Et)-DBip(2-Et)
104	HAE-$(CH_2)_2$-F-$(CH_2)_2$-Bip(2-Et)-DBip(2-Me)
105	HAib-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Me)

The following compounds can be prepared according to the general processes described above and are included within the scope of the present invention (Tables 7-9)

Table 7:

S. No.	**Sequence**
1	HA-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
2	H-Aib-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
3	Ha-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
4	H-(N(Me))A-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
5	H-(N(Me))A-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
6	H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
7	H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
8	H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
9	H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
10	H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

11	Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
12	Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
13	H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
14	H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
15	H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3
16	H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3
17	CH_3-$(CH_2)_6$-NH-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
18	CH_3-$(CH_2)_6$-NH-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
19	CH_3-$(CH_2)_{10}$-NH-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
20	CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
21	HA-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
22	H-Aib-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
23	Ha-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
24	H-(N(Me))A-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
25	H-(N(Me))A-(N(Me))-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
26	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
27	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
28	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
29	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-

	Me-Ph)-3-Pyr-Ala-NH_2
30	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
31	Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
32	Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
33	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
34	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
35	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3
36	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3
37	CH_3-$(CH_2)_6$-NH-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
38	CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
39	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
40	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
41	HA-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
42	H-Aib-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
43	H-a-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
44	H-(N(Me))A-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
45	H-(N(Me))A-(N(Me))-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
46	H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
47	H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

48	H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
49	H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
50	H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
51	Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
52	Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
53	H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
54	H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
55	H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3
56	H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3
57	CH_3-$(CH_2)_6$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
58	CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
59	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
60	CH_3-$(CH_2)_{10}$-NH-H-N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
61	HAE-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
62	H-Aib-E-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
63	HaE-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
64	H-(N(Me))AE-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
65	H-(N(Me))AE-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
66	H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-

	Ala-NH_2
67	H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
68	H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
69	H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
70	H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
71	Des-amino-H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
72	Des-amino-H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
73	H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
74	H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
75	H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3
76	H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3
77	CH_3-$(CH_2)_6$-NH-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
78	CH_3-$(CH_2)_6$-NH-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
79	CH_3-$(CH_2)_{10}$-NH-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
80	CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
81	HAEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
82	H-Aib-EG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
83	HaEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
84	H-(N(Me))AEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

85	H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
86	H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
87	H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
88	H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
89	H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
90	H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
91	Des-amino-H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
92	Des-amino-H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
93	H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
94	H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
95	H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3
96	H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3
97	CH_3-$(CH_2)_6$-NH-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
98	CH_3-$(CH_2)_6$-NH-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
99	CH_3-$(CH_2)_{10}$-NH-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
100	CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
101	HAEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

102	H-Aib-EGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
103	HaEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
104	H-(N(Me))AEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
105	H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
106	H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
107	H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
108	H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
109	H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
110	H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
111	Des-amino-H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
112	Des-amino-H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2
113	H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
114	H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
115	H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3
116	H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3
117	CH_3-$(CH_2)_6$-NH-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
118	CH_3-$(CH_2)_6$-NH-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
119	CH_3-$(CH_2)_{10}$-NH-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

120	CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3
121	HA-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-NH_2
122	H-Aib-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-NH_2
123	Ha-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-NH_2
124	H-(N(Me))A-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-NH_2
125	H-(N(Me))A-(N(Me))-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-NH_2
126	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-NH_2
127	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-Bip(2-Me)-NH_2
128	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-Bip(2-Me)-NH_2
129	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH_2
130	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH_2
131	Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH_2
132	Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH_2
133	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3
134	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3
135	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_{10}$-CH_3
136	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_{10}$-CH_3
137	CH_3-$(CH_2)_6$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3
138	CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3
139	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3
140	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

141	HA-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-NH_2
142	H-Aib-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-NH_2
143	Ha-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-NH_2
144	H-(N(Me))A-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-NH_2
145	H-(N(Me))A-(N(Me))-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-NH_2
146	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-NH_2
147	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Me)-NH_2
148	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Me)-NH_2
149	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH_2
150	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH_2
151	Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH_2
152	Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH_2
153	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3
154	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3
155	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_{10}$-CH_3
156	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_{10}$-CH_3
157	CH_3-$(CH_2)_6$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3
158	CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3
159	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3
160	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

Table 8:

S. No.	Sequence
1	HA-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
2	H-Aib-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
3	Ha-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
4	H-(N(Me))A-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
5	H-(N(Me))A-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
6	H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
7	H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
8	H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
9	H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
10	H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
11	Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
12	Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
13	H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
14	H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
15	H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3
16	H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3
17	CH_3-$(CH_2)_6$-NH-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
18	CH_3-$(CH_2)_6$-NH-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

19	CH_3-$(CH_2)_{10}$-NH-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
20	CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
21	HA-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
22	H-Aib-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
23	Ha-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
24	H-(N(Me))A-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
25	H-(N(Me))A-(N(Me))-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
26	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
27	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
28	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
29	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
30	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
31	Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
32	Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
33	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
34	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
35	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3
36	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3
37	CH_3-$(CH_2)_6$-NH-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

38	CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
39	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
40	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
41	HA-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
42	H-Aib-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
43	Ha-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
44	H-(N(Me))A-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
45	H-(N(Me))A-(N(Me))-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
46	H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
47	H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
48	H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
49	H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
50	H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
51	Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
52	Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
53	H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
54	H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
55	H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3
56	H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3

57	CH_3-$(CH_2)_6$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
58	CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
59	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
60	CH_3-$(CH_2)_{10}$-NH-H-N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
61	HAE-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
62	H-Aib-E-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
63	HaE-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
64	H-(N(Me))AE-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
65	H-(N(Me))AE-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
66	H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
67	H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
68	H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
69	H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
70	H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
71	Des-amino-H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
72	Des-amino-H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
73	H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
74	H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
75	H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-

	Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3
76	H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3
77	CH_3-$(CH_2)_6$-NH-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
78	CH_3-$(CH_2)_6$-NH-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
79	CH_3-$(CH_2)_{10}$-NH-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
80	CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
81	HAEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
82	H-Aib-EG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
83	HaEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
84	H-(N(Me))AEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
85	H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
86	H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
87	H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
88	H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
89	H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
90	H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
91	Des-amino-H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
92	Des-amino-H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
93	H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

94	H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
95	H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3
96	H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3
97	CH_3-$(CH_2)_6$-NH-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
98	CH_3-$(CH_2)_6$-NH-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
99	CH_3-$(CH_2)_{10}$-NH-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
100	CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
101	HAEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
102	H-Aib-EGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
103	HaEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
104	H-(N(Me))AEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
105	H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
106	H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
107	H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
108	H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH
109	H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
110	H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
111	Des-amino-H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
112	Des-amino-H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-

	(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH
113	H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
114	H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
115	H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3
116	H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3
117	CH_3-$(CH_2)_6$-NH-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
118	CH_3-$(CH_2)_6$-NH-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
119	CH_3-$(CH_2)_{10}$-NH-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
120	CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3
121	HA-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-OH
122	H-Aib-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-OH
123	Ha-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-OH
124	H-(N(Me))A-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-OH
125	H-(N(Me))A-(N(Me))-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-OH
126	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-OH
127	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-Bip(2-Me)-OH
128	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-Bip(2-Me)-OH
129	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-OH
130	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-OH
131	Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-OH
132	Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-OH
133	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3

134	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3
135	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_{10}$-CH_3
136	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_{10}$-CH_3
137	CH_3-$(CH_2)_6$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3
138	CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3
139	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3
140	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3
141	HA-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-OH
142	H-Aib-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-OH
143	Ha-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-OH
144	H-(N(Me))A-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-OH
145	H-(N(Me))A-(N(Me))-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-OH
146	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-OH
147	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Me)-OH
148	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Mc)-OH
149	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-OH
150	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-OH
151	Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-OH
152	Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-OH
153	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3
154	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3
155	H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-

	$(CH_2)_{10}$-CH_3
156	H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_{10}$-CH_3
157	CH_3-$(CH_2)_6$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3
158	CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3
159	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3
160	CH_3-$(CH_2)_{10}$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3

Table 9:

S. No.	**Sequence**
1	HA-$(CH_2)_3$-DVSSYLEGQAAKEFIKELEKLL
2	HAib-$(CH_2)_3$-DVSSYLEGQAAKEFIKELEKLL
3	HAibEGTFTSDVSSYLEGQ-$(CH_2)_2$-KELEKLL
4	HAibEGTFTSDVSSYLEGQ-$(CH_2)_3$-KELEKLL
5	HAibEGTFTSDVSSYLE-$(CH_2)_2$-FIKELEKLL
6	HAibEGT-(α-Me)Phe(2-F)-TSDVSSYLE-$(CH_2)_2$-FIKELEKLL
7	HAib-$(CH_2)_3$-VSSYLE-$(CH_2)_2$-FIKELEKLL
8	HAib-$(CH_2)_3$-VSSYLE-$(CH_2)_3$-FIKELEKLL
9	HAib-$(CH_2)_3$-YLE-$(CH_2)_3$-FIKELEKLL
10	HAib-$(CH_2)_4$-YLE-$(CH_2)_3$-FIKELEKLL
11	HAib-$(CH_2)_4$-YL-$(CH_2)_3$-FIKELEKLL
12	HAib-$(CH_2)_4$-Y-$(CH_2)_3$-FIKELEKLL
13	HAib-$(CH_2)_4$-FIKELEKLL
14	HAib-$(CH_2)_5$-FIKELEKLL
15	HAib-$(CH_2)_6$-FIKELEKLL
16	HAib-$(CH_2)_8$-FIKELEKLL
17	HAib-$(CH_2)_3$-VSSYLEGQ-$(CH_2)_3$-KELEKLL
18	HAib-$(CH_2)_3$-VSSYLEG-$(CH_2)_3$-KELEKLL

19	HAib-$(CH_2)_3$-VSSYLE-$(CH_2)_4$-KELEKLL
20	HAib-$(CH_2)_3$-SSYLE-$(CH_2)_4$-KELEKLL
21	HAib-$(CH_2)_3$-SYLE-$(CH_2)_4$-KELEKLL
22	HAib-$(CH_2)_3$-YLE-$(CH_2)_4$-KELEKLL
23	HAib-$(CH_2)_3$-YL-$(CH_2)_4$-KELEKLL
24	HAib-$(CH_2)_3$-Y-$(CH_2)_4$-KELEKLL
25	HAib-$(CH_2)_5$-KELEKLL
26	HAib-$(CH_2)_6$-KELEKLL
27	HAib-$(CH_2)_8$-KELEKLL

The peptidomimetics prepared as described above were tested for GLP-1 agonist activity in vitro using the cAMP cell-based assay described below. The GLP-1 mimetic peptide analog stimulated cAMP production in a dose response manner and the corresponding EC_{50} value were determined for some of the selected peptidomimetics, which are active in vitro at 10 to 100 nM range. The EC_{50} value of EX-4 was used as a positive control.

Cyclic AMP determination

The GLP-1 receptor is a G-protein coupled receptor. GLP-1 (7-36)-amide, the biologically active form, binds to the GLP-1 receptor and through signal transduction causes activation of adenylate cyclase and raises intracellular cAMP levels. To monitor agonism of peptide compounds in stimulating the GLP-1 receptor, adenyl cyclase activity was monitored by assaying for cellular cAMP levels.

cAMP assay:

Stably transfected CHO/HGLP1R cells were assayed for cAMP generation in a semi high throughput platform using DiscoverX cAMP kit with Exendin-4 as a positive control. The activity of NCEs was determined as % Exendin-4 activity at 0.01μM concentration. The positive compounds were further validated for cAMP generation using indirect cAMP ELISA kit (R & D systems) The activity of the compounds was expressed as fmol cAMP/μg of protein. EC_{50} values of some of the representative compounds (I to IV) are shown in Figure 1.

Demonstration of in vivo efficacy of compounds:

The in- vivo glucose lowering properties of some of the representative compounds in animal models is described below. This test was used to examine in vivo efficacy of compounds of the present invention on blood glucose at hyperglycemia. The intra peritoneal glucose tolerance test (IPGTT) was performed in overnight fasted Swiss Albino Mice (SAM), weighing 25-30 g. Mice were given glucose load of 1.5g/

Kg/ 10 ml and blood was collected at different time intervals, via retroorbital plexus. Test compounds (peptidomimetics) were dissolved in an appropriate vehicle at a concentration in nmol/ ml equivalent to the dose that was to be administered in nmol / kg, so that each mouse would receive the same volume / weight of dosing solution.

Blood samples were drawn prior to Vehicle/Test compound/Glucose load (0 minute) and then at 15 min, 30 min, 60 min and 120 min. Vehicle/Test compound was administered 15 minutes prior to glucose load, via intra-peritoneal route of administration. Blood samples were centrifuged and the obtained serum was stored at -20° C for analysis. Test compounds were examined along with a reference (positive control) and a vehicle control, with n = 6 animals per group. Glucose was determined by the GOD/POD method from serum. The mean value of duplicate results was calculated. The absolute values of glucose in serum levels were calculated using MS Excel software. The 0-minute base line corrected line graph were plotted using Graphpad prism software (ver 3.0). Area under the Curve (AUC) and Base line corrected area under the curve (BCAUC) were calculated and analyzed by performing One way ANOVA followed by Dunnett's post test using Graphpad prism software (ver 3.0).

Using above experimental protocol, in vivo glucose lowering properties of some of the selected compounds, which showed in vitro EC_{50}, in CHO-GLP-1R cAMP assay, in the range of 1-50 nM range were determined. In Table 10, the in vivo glucose lowering potencies (ED_{50} in IPGTT SAM model) of selected four representative compounds (Comp. I, II, III & IV) were given.

Table 10: In vivo potencies of compound I to IV (ED_{50}), in IPGTT SAM Model

Comp.	ED_{50} in IPGTT SAM Model (n = 6)
I	1 μmole / kg
II	500 nM / Kg
III	250 nM / kg
IV	100 nM / Kg

Several compounds of the present invention were screened in vivo, using other animal models, such as ob/ob, db/db and C57 and they showed in vivo efficacy and potency in varying degrees.

Utilities:

The present invention provides novel GLP-1 peptide mimics, with a preference for mimicking GLP-1, such that the compounds of the present invention have agonist activity for the GLP-1 receptor. Further, many of the GLP peptide mimics of the present invention exhibit increased stability to proteolytic cleavage as compared to GLP-1 native sequences.

Accordingly, the compounds of the present invention can be administered to mammals, preferably humans, for the treatment of a variety of conditions and disorders, including, but not limited to, treating or delaying the progression or onset of diabetes (preferably type II, impaired glucose tolerance, insulin resistance and diabetic complications, such as nephropathy, retinopathy, neuropathy and cataracts), hyperglycemia, hyperinsulinemia, hypercholesterolemia, elevated blood levels of free fatty acids or glycerol, hyperlipidemia, hypertriglyceridemia, obesity, wound healing, tissue ischemia, atherosclerosis, hypertension, intestinal diseases (such as necrotizing enteritis, microvillus inclusion disease or celic disease). The compound of the present invention may also be utilized to increase the blood levels of high density lipoprotein (HDL).

In addition, the conditions, diseases collectively referenced to as 'Syndrome X' or metabolic syndrome as detailed in Johannsson J., Clin. Endocrinol. Metab., 82, 727-34,1997, may be treated employing the compounds of the invention. The compounds of the present invention may optionally be used in combination with suitable DPP-IV inhibitors for the treatment of some of the above disease states either by administering the compounds sequentially or as a formulation containing the compounds of the present invention along with a suitable DPP-IV inhibitors.

No adverse effects were observed for any of the mentioned compounds of invention. The compounds of the present invention showed good glucose serum-lowering activity in the experimental animals used. These compounds are used for the testing/ prophylaxis of diseases caused by hyperinsulinaemia, hyperglycemia such as NIDDM, metabolic disorders and obesity since such diseases are inter-linked to each other.

We claim:

1. An isolated polypeptide having a sequence of Formula (I), including its tautomers, solvates and pharmaceutically acceptable salts

$$A\text{-}X_1\text{-}S_1\text{-}Y\text{-}S_2\text{-}X_2\text{-}B \quad (I)$$

wherein,

A represents –NH-R_1, wherein R_1 represents hydrogen, groups selected from linear or branched (C_1-C_{15}) alkyl chain, an amino acid or peptide containing one, two or three natural amino acid residues, R_3-CO- group, R_3O-C(O)- group, a sulfonyl group of formula R_3-SO_2-, each of these groups may be substituted; R_3 is selected from linear or branched (C_1-C_{10}) alkyl, (C_3-C_6) cycloalkyl, aryl, heteroaryl, arylalkyl groups, each of these groups may be substituted;

B represents –$COOR_2$, -$CONHR_2$ or CH_2OR_2, R_2 represents H, groups selected from linear or branched (C_1-C_{10}) alkyl, aryl groups selected from phenyl, napthyl, indanyl, fluorenyl, biphenyl groups, aralkyl group, wherein the aryl groups are as defined earlier, each of these groups may be substituted;

each of S_1 and S_2 may independently be a bond or independently represents a group '-NH-$(CH_2)_n$-COO-', where, n=1-9;

Y represents a bond or –CO-, -$(CH_2)_m$- (m = 1-3), 'O', 'S', -CO-NH-, -CO-NR_4-, or represents a short peptide containing one or two or three amino acids selected from natural or non-natural amino acids; where R_4 represents H, optionally substituted groups selected from linear or branched (C_1-C_{10}) alkyl or aryl groups selected from phenyl, napthyl, indanyl, fluorenyl, biphenyl groups; with the proviso that when S_1-Y-S_2 represents a bond,

X_1 is selected from the following amino acid sequences

HAEGTFTSD, HAEGTFTSDV, HAEGTFTSDVS, HAEGTFTSDVSS, HAEGTFTSDVSSY, HAEGTFTSDVSSYL, HAEGTFTSDVSSYLE, HAEGTFTSDVSSYLEG, HAEGTFTSDVSSYLEGQ, HAEGTFTSDVSSYLEGQA, HAEGTFTSDVSSYLEGQAA, HAEGTFTSDVSSYLEGQAAK, HAEGTFTSDVSSYLEGQAAKE, HAEGTFTSDVSSYLEGQAAKEF, HAEGTFTSDVSSYLEGQAAKEFI, with the further option that one or more of these amino acids may be replaced by unnatural amino acids, and X_2 is selected from the following amino acid sequences

GPSSGAPPPS or

KELEKLL or

GPPS or

VKGR;

and when S_1-Y-S_2 does not represent a bond

X_1 is selected from the following amino acid sequences

HA, HAE, HAEG, HAEGT, HAEGTF, HAEGTFT, HAEGTFTS, HAEGTFTSD with the further option that one or more of these amino acids may be replaced by unnatural amino acids;

X_2 is selected from

GPSSGAPPPS or

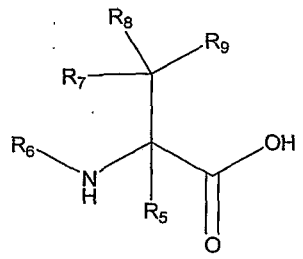
KELEKLL or

GPPS or

VKGR or

a dipeptide, selected from combination of two amino acids consisting of natural or unnatural amino acids, having a side chain containing an arylalkyl or heterorylalkyl moieties selected from benzyl, napthylmethyl, pyridylmethyl, thienylmethyl, furylmethyl, imidazolylmethyl, isooxazolylmethyl, quinolylmethyl, benzofuranylmethyl, benzothienylmethyl, indolinylmethyl, indolylmethyl, dibenzofuranylmethyl, dibenzothienylmethyl, benzodihydrofuranylmethyl, benzodihydrothienylmethyl, thienopyrimidylmethyl, benzimidazolylmethyl, phenanthrenylmethyl, dihydrophenanthrenylmethyl, fluorenylmethyl, dibenzofuranylmethyl, dibenzothiophenyl methyl groups, where each of these groups may be optionally substituted with (C_1-C_6)alkyl, (C_1-C_6)alkoxy, cyano, halo, hydroxy or optionally substituted aryl or heteroaryl groups, with the further provision that such aryl or heteroaryl substituents may further be optionally substituted with (C_1-C_6)alkyl, (C_1-C_6)alkoxy, cyano, halo, hydroxy or aryl or heteroaryl groups.

2. A compound as claimed in claim 1 wherein the non-natural amino acids are represented by the general formula (IIa)



(IIa)

wherein R_5 is selected from H, F, (C_1-C_5) alkyl, the stereochemical configuration at the carbon bearing R_5 may be (R) or (S); R_6 is selected from H or (C_1-C_3) alkyl; each of R_7 and R_8 is independently selected from H, (C_1-C_2) alkyl or halogen atom, preferably fluorine atom; R_9 represents groups, selected from (C_1-C_5) alkyl, aryl or heteroryl moieties selected from phenyl, napthyl, pyridyl, thienyl, furyl, imidazolyl, isooxazolyl, quinolyl, benzofuranyl, benzothienyl, indolinyl, indolyl, dibenzofuranyl, dibenzothienyl, benzodihydrofuranyl, benzodihydrothienyl, thienopyrimidyl, benzimidazolyl, phenanthrenyl, dihydrophenanthrenyl, fluorenyl, dibenzofuranyl, dibenzothiophenyl groups, where each of these groups may be optionally substituted with (C_1-C_6) alkyl, (C_1-C_6) alkoxy, cyano, halo, hydroxy or optionally substituted aryl or heteroaryl groups, with the further provision that such aryl or heteroaryl substituents may further be optionally substituted with (C_1-C_6)alkyl, (C_1-C_6)alkoxy, cyano, halo, hydroxy or aryl or heteroaryl groups.

3. The isolated peptide as claimed in claim 1, wherein the dipeptide representing X_2 is preferably selected from Bip, Bip(2-Me), Bip(2-Et), Bip(2-Ipr), Bip(2-CN), Bip(2'-Et-4'-OMe), Bip(4'-fluoro), Bip(4'-Phenyl), 2-(9,10-Dihydro-phenanthrenyl]-Ala, 2-(Phenanthrenyl)-Ala, 4-(2-Naphthyl)-Phe, 4-(1-Naphthyl)-Phe, 2-Fluorenyl-Ala, 4-dibenzofuran-Phe, 4-dibenzothiophene-Phe, 4-(2'-methylphenyl)-3-pyridylalanine groups.

4. The isolated peptide as claimed in claim 1, wherein the substituents are selected from hydroxyl, oxo, halo, thio, nitro, amino, cyano, alkyl, haloalkyl, alkoxy, haloalkoxy, cycloalkyl, aryl, aryloxy, aralkyl, aralkoxy, heteroaryl, heteroaralkyl, heteroaryloxy, heteroaralkoxy, acyl, acyloxy, carboxylic acid and its derivatives selected from esters and amides.

5. The isolated polypeptide of claim 1, wherein the isolated polypeptide is a compound selected from

HGEGTFTSD-$(CH_2)_3$-GPSSGAPPPS

HGEGTFTSD-$(CH_2)_4$-GPSSGAPPPS

HGEGTFTSD-$(CH_2)_5$-GPSSGAPPPS

HGEGTFTSD-$(CH_2)_6$-GPSSGAPPPS

HGEGTFTSD-$(CH_2)_7$-GPSSGAPPPS

HGEGTFTSD-$(CH_2)_{10}$-GPSSGAPPPS

HGEGTFTSD-$(CH_2)_{11}$-GPSSGAPPPS

HGEGTFTSDLSKQM-$(CH_2)_3$-GPSS

HGEGTFTSDLSKQM-$(CH_2)_4$-GPSS

HGEGTFTSDLSKQM-$(CH_2)_5$-GPSS

HGEGTFTSDLSKQM-$(CH_2)_6$-GPSS

HGEGTFTSDLSKQM-$(CH_2)_7$-GPSS

HGEGTFTSDLSKQM-$(CH_2)_{10}$-GPSS

HGEGTFTSDLSKQM-$(CH_2)_{11}$-GPSS

HGEGTFTSDLSKQME-G-GPSSGAPPPS

HGEGTFTSDLSKQME-$(CH_2)_2$-GPSSGAPPPS

HGEGTFTSDLSKQME-$(CH_2)_3$-GPSSGAPPPS

HGEGTFTSDLSKQME-$(CH_2)_4$-GPSSGAPPPS

HGEGTFTSDLSKQME-$(CH_2)_5$-GPSSGAPPPS

HGEGTFTSDLSKQME-$(CH_2)_6$-GPSSGAPPPS

HGEGTFTSDLSKQME-$(CH_2)_7$-GPSSGAPPPS

HGEGTFTSDLSKQME-$(CH_2)_{10}$-GPSSGAPPPS

HGEGTFTSDLSKQME-$(CH_2)_{11}$-GPSSGAPPPS

HAEGTFTSD-$(CH_2)_2$-VKGR

HAEGTFTSD-$(CH_2)_3$-VKGR

HAEGTFTSD-$(CH_2)_4$-VKGR

HAEGTFTSD-$(CH_2)_5$-VKGR

HAEGTFTSD-$(CH_2)_6$-VKGR

HAEGTFTSD-$(CH_2)_{10}$-VKGR

HAibEGTFTSD-$(CH_2)_2$-VKGR

HAibEGTFTSD-$(CH_2)_3$-VKGR

HAibEGTFTSD-$(CH_2)_4$-VKGR

HAibEGTFTSD-$(CH_2)_5$-VKGR

HAibEGTFTSD-$(CH_2)_6$-VKGR

HAibEGTFTSD-$(CH_2)_{10}$-VKGR

HGEGTFTSDLSKQMKELEKLL

HAEGTFTSDKELEKLL

HGEGTFTSDKELEKLL

HAibEGTFTSDGKELEKLL

HGEGTFTSDGKELEKLL

HGEGTFTSDVSKELEKLL

HAEGTFTSDVSKELEKLL

HAEGTFTSDVSEKELEKLL

HAEGTFTSDVSGKELEKLL

HAEGTFTSDVSSYLEKELEKLL

HAEGTFTSDVSSYLEGKELEKLL

HGEGTFTSDVSSYLEGKELEKLL

HaEGTFTSDVSSYLEGKELEKLL

HAibEGTFTSDVSSYLEGKELEKLL

HAEGTFTSDVSSYLEGKELEKLLVKG

HAEGTFTSDVSSYLEPKELEKLL

HAEGTFTSDVSSYLEGQAAKELEKLL

HAEGTFTSDVSSYLEGQAAKEFIKELEKLL

HAibEGTFTSDVSSYLEGQAAKEFIKELEKLL

HAibEGT-(α-Me)Phe(2-F)-TSDVSSYLEGQAAKEFIKELEKLL

Des-amino-HAibEGT-(α-Me)Phe(2-F)-TSDVSSYLEGQAAKEFIKELEKLL

HAEGTFTSD-$(CH_2)_3$-KELEKLL

HAEGTFTSD-$(CH_2)_4$-KELEKLL

HAEGTFTSD-$(CH_2)_5$-KELEKLL

HAEGTFTSD-$(CH_2)_6$-KELEKLL

HA-$(CH_2)_3$-DVSSYLEGQAAKEFIKELEKLL

HAib-$(CH_2)_3$-DVSSYLEGQAAKEFIKELEKLL

HAibEGTFTSDVSSYLEGQ-$(CH_2)_2$-KELEKLL

HAibEGTFTSDVSSYLEGQ-$(CH_2)_3$-KELEKLL

HAibEGTFTSDVSSYLE-$(CH_2)_2$-FIKELEKLL

HGEGTFTSD-$(CH_2)_3$-Bip-Bip

HAibEGTFTSD-$(CH_2)_3$-Bip-Bip

HAibEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_3$-Bip-Bip

HAEGTFTSD-G-Bip(2-Me)-Bip(2-Me)

HAibEGTFTSD-G-Bip(2-Me)-Bip(2-Me)

HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Me)-Bip(2-Me)

HAEGTFTS-G-Bip(2-Me)-Bip(2-Me)

HAibEGTFTS-G-Bip(2-Me)-Bip(2-Me)

HAibEGT-(α-Me)-Phe(2-F)-TS-G-Bip(2-Me)-Bip(2-Me)

HAEGTFTS-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAibEGTFTS-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAibEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAEGTFT-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAibEGTFT-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAibEGT-(α-Me)-Phe(2-F)-T-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAEGTF-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAibEGTF-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAibEGT-(α-Me)-Phe(2-F)-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAEGT-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAibEGT-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAEG-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAibEG-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAEGTFTSD-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAibEGTFTSD-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAibEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HAEGTFTSD-G-Bip-Bip(2-Me)

HAibEGTFTSD-G-Bip-Bip(2-Me)

HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip-Bip(2-Me)

HAEGTFTSD-G-Bip(2-Me)-Bip

HAibEGTFTSD-G-Bip(2-Me)-Bip

HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Me)-Bip

HAEGTFTSD-G-Bip-Bip HAibEGTFTSD-G-Bip-Bip

HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip-Bip

HAEGTFTSD-G-Bip-Bip(2-Et)

HAibEGTFTSD-G-Bip-Bip(2-Et)

HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip-Bip(2-Et)

HAEGTFTSD-G-Bip(2-Et)-Bip(2-Et)

HAibEGTFTSD-G-Bip(2-Et)-Bip(2-Et)

HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Et)-Bip(2-Et)

HAEGTFTSD-G-Bip(2-Et)-Bip

HAibEGTFTSD-G-Bip(2-Et)-Bip

HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Et)-Bip

HAEGTFTSD-G-Bip(2-Et)-Bip(2-Me)

HAibEGTFTSD-G-Bip(2-Et)-Bip(2-Me)

HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Et)-Bip(2-Me)

HAEGTFTSD-G-Bip(2-Me)-Bip(2-Et)

HAibEGTFTSD-G-Bip(2-Me)-Bip(2-Et)

HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Me)-Bip(2-Et)

HGEGTFTSD-G-Bip(2-Me)-Bip(2-Me)

HGEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Me)-Bip(2-Me)

HGEGTFTSD-G-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-Et)-Bip(2-Et)

HGEGTFTSD-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)

HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)

HGEGTFTSD-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)

HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)

HGEGTFTSD-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)

HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)

HGEGTFTSD-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)

HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)

HGEGTFTSD-$(CH_2)_{10}$-Bip(2-Me)-Bip(2-Me)

HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_{10}$-Bip(2-Me)-Bip(2-Me)

HGEGTFTSD-$(CH_2)_3$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_3$-Bip(2-Et)-Bip(2-Et)

HGEGTFTSD-$(CH_2)_4$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_4$-Bip(2-Et)-Bip(2-Et)

HGEGTFTSD-$(CH_2)_5$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_5$-Bip(2-Et)-Bip(2-Et)

HGEGTFTSD-$(CH_2)_6$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_6$-Bip(2-Et)-Bip(2-Et)

HGEGTFTSD-$(CH_2)_{10}$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_{10}$-Bip(2-Et)-Bip(2-Et)

HGEGTFTSD-$(CH_2)_{11}$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_{11}$-Bip(2-Et)-Bip(2-Et)

HGEGTFTS-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)

HGEGTFTS-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)

HGEGTFTS-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)

HGEGTFTS-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)

HGEGTFTS-$(CH_2)_{10}$-Bip(2-Me)-Bip(2-Me)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_{10}$-Bip(2-Me)-Bip(2-Me)

HGEGTFTS-$(CH_2)_{11}$-Bip(2-Me)-Bip(2-Me)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_{11}$-Bip(2-Me)-Bip(2-Me)

HGEGTFTS-$(CH_2)_3$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_3$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_4$-Bip(2-Et)-Bip(2-Et)

HGEGTFTS-$(CH_2)_4$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_4$-Bip(2-Et)-Bip(2-Et)

HGEGTFTS-$(CH_2)_5$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_5$-Bip(2-Et)-Bip(2-Et)

HGEGTFTS-$(CH_2)_6$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_6$-Bip(2-Et)-Bip(2-Et)

HGEGTFTS-$(CH_2)_{10}$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_{10}$-Bip(2-Et)-Bip(2-Et)

HGEGTFTS-$(CH_2)_{11}$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_{11}$-Bip(2-Et)-Bip(2-Et)

HGEGTFTS-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HGEGTFTS-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)

HAEGTFTS-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)

HAibEGTFTS-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)

HAibEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)

HGEGTFTSD-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)

HGEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)

HAEGTFTSD-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)

HAibEGTFTSD-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)

HAibEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_2$-Bip(2-Et)-Bip(2-Et)

HAEGTF-$(CH_2)_2$-Bip(2-Me)-Bip(2-Et)

HAibEGTF-$(CH_2)_2$-Bip(2-Me)-Bip(2-Et)

HAibEGT-(α-Me)-Phe(2-F)-$(CH_2)_2$-Bip(2-Me)-Bip(2-Et)

HAEGTFTSD-G-TrPh-TrPh

HAibEGTFTSD-G-TrPh-TrPh

HAibEGT-(α-Me)-Phe(2-F)-TSD-G-TrPh-TrPh

HAibEGT-(α-Me)-Phe(2-F)-$(CH_2)_2$-TrPh-TrPh

HAibEG-$(CH_2)_2$-TrPh-TrPh

HAibE-$(CH_2)_2$-TrPh-TrPh

HAib-$(CH_2)_3$-TrPh-TrPh

HAEGTFTSD-G-Nap-Nap

HAibEGTFTSD-G-Nap-Nap

HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Nap-Nap

HAEGTFTSD-G-Bip(2-F)-Bip(2-F)

HAibEGTFTSD-G-Bip(2-F)-Bip(2-F)

AibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2-F)-Bip(2-F)

HAEGTFTSD-G-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAibEGTFTSD-G-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAibEGT-(α-Me)-Phe(2-F)-TSD-G-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAEGTFTSD-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAibEGTFTSD-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAibEGT-(α-Me)-Phe(2-F)-TSD-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAEGTFTS-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAibEGTFTS-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAibEGT-(α-Me)-Phe(2-F)-TS-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala HAEGTFT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAibEGTFT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAibEGT-(α-Me)-Phe(2-F)-T-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAEGTF-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAibEGTF-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAibEGT-(α-Me)-Phe(2-F)-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAibEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAibEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAEG-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAibEG-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala

HAEGT-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HGEGT-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)

HGEGT-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)

HGEGT-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)

HGEGT-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)

HAEGT-$(CH_2)_2$-Bip(2-Me)-DBip(2-Me)

HAEGT-$(CH_2)_2$-DBip(2-Me)-Bip(2-Me)

HaEGT-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

HGEG-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)

HAEG-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)

HGEG-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)

HGEG-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)

HGEG-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)

HAEG-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)

HAEG-$(CH_2)_3$-Bip(2-Me)-DBip(2-Me)

HAEG-$(CH_2)_4$-Bip(2-Me)-DBip(2-Me)

HAEG-$(CH_2)_5$-Bip(2-Me)-DBip(2-Me)

HGEG-$(CH_2)_5$-DBip(2-Me)-Bip(2-Me)

HAE-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)

HAE-$(CH_2)_3$-Bip(2-Me)-DBip(2-Me)

HAE-$(CH_2)_2$-D-Bip(2-Me)-Bip(2-Me)

HAE-$(CH_2)_3$-D-Bip(2-Me)-Bip(2-Me)

HAE-$(CH_2)_4$-D-Bip(2-Me)-Bip(2-Me)

HAE-$(CH_2)_4$-Bip(2-Me)-DBip(2-Me)

HAE-$(CH_2)_5$-D-Bip(2-Me)-Bip(2-Me)

HAE-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)

HAE-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)

H-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)

H-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)

H-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)

H-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)

H-$(CH_2)_4$-Bip(2-Et)-Bip(2-Me)

H-$(CH_2)_5$-Bip(2-Et)-Bip(2-Me)

H-$(CH_2)_6$-Bip(2-Et)-Bip(2-Me)

H-$(CH_2)_{10}$-Bip(2-Et)-Bip(2-Me)

H-$(CH_2)_5$-Bip(2-Me)-DBip(2-Me)

H-$(CH_2)_5$-DBip(2-Me)-Bip(2-Me)

H-$(CH_2)_5$-DBip(2-Me)-DBip(2-Me)

HG-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)

HG-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)

HG-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)

HG-$(CH_2)_4$-Bip(2-Et)-Bip(2-Me)

HG-$(CH_2)_3$-Bip(2-Et)-DBip(2-Me)

HG-$(CH_2)_3$-Bip(2-Me)-DBip(2-Me)

FA-$(CH_2)_3$-DBip(2-Me)-Bip(2-Et)

FA-$(CH_2)_3$-DBip-Dbip

Ha-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)

Ha-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)

Ha-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)

Ha-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)

Ha-$(CH_2)_3$-Bip(2-Et)-DBip(2-Me)

Ha-$(CH_2)_3$-Bip(2-Me)-DBip(2-Me)

Ha-$(CH_2)_3$-Bip(2-Et)-DBip(2-Et)

Ha-$(CH_2)_3$-Bip(2-Me)-Bip

Ha-$(CH_2)_3$-(N(Me))-DBip(2-Me)-Bip(2-Et)

Ha-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Me)

Ha-$(CH_2)_3$-(N(Me))-DBip-Bip(2-Et)

Ha-$(CH_2)_3$-DBip(2-Me)-Bip(2-Et)

HA-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)
HA-$(CH_2)_4$-Bip(2-Me)-Bip(2-Me)
HA-$(CH_2)_5$-Bip(2-Me)-Bip(2-Me)
HA-$(CH_2)_6$-Bip(2-Me)-Bip(2-Me)
HA-$(CH_2)_{10}$-Bip(2-Me)-Bip(2-Me)
HA-$(CH_2)_{11}$-Bip(2-Me)-Bip(2-Me)
HA-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)
HA-$(CH_2)_3$-Bip(2-Et)-DBip(2-Et)
HA-$(CH_2)_3$-DBip(2-Me)-DBip(2-Me)
HA-$(CH_2)_3$-DBip(2-Me)-Bip(2-Me)
HA-$(CH_2)_3$-Bip(2-Me)-DBip(2-Me)
HA-$(CH_2)_3$-Bip(2-Ipr)-Bip(2-Ipr)
HA-$(CH_2)_3$-Bip(2-Ipr)-Bip(2-Me)
HA-$(CH_2)_3$-Bip(2-Me)-Bip(2-Ipr)
HA-$(CH_2)_4$-Bip(2-Et)-Bip(2-Me)
HA-$(CH_2)_3$-Bip(2-Me)-DBip(2-Et)
HA-$(CH_2)_2$-Bip(2-Et)-Bip(2-Me)
HA-$(CH_2)_5$-Bip(2-Et)-Bip(2-Me)
HA-$(CH_2)_6$-Bip(2-Et)-Bip(2-Me)
HA-$(CH_2)_2$-Bip(2-Me)-Bip(2-Me)
HA-$(CH_2)_3$-DBip(2-Et)-DBip(2-Me)
HA-$(CH_2)_3$-DBip(2-Et)-Bip(2-Me)
HA-$(CH_2)_2$-Bip(2-Me)-DBip(2-Me)
HA-$(CH_2)_3$-Bip(2-Et)-Bip(2-Et)
HA-$(CH_2)_3$-DBip(2-Et)-DBip(2-Et)
HA-$(CH_2)_3$-DBip(2-Et)-Bip(2-Et)
HA-$(CH_2)_3$-DBip(2-Me)-DBip(2-Et)
HA-$(CH_2)_3$-Bip(2-Me)-Bip(2-Et)
HA-$(CH_2)_3$-DBip(2-Me)-Bip(2-Et)
HA-$(CH_2)_3$-Bip-Bip
HA-$(CH_2)_3$-Bip-D-Bip
HA-$(CH_2)_3$-DBip-D-Bip
HA-$(CH_2)_3$-DBip-Bip
HA-$(CH_2)_3$-Bip-Bip(2-Me)

HA-$(CH_2)_3$-Bip(2-Me)-Bip
HA-$(CH_2)_3$-Bip(2-Et)-Bip
HA-$(CH_2)_3$-Bip-Bip(2-Et)
HA-$(CH_2)_3$-Bip(2-Ipr)-DBip(2-Ipr)
HA-$(CH_2)_3$-DBip(2-Ipr)-Bip(2-Ipr)
HA-$(CH_2)_3$-DBip(2-Ipr)-DBip(2-Ipr)
HA-$(CH_2)_3$-Bip(2-Me)-Bip(2-CN)
HA-$(CH_2)_3$-Bip-Bip(2-CN)
HA-$(CH_2)_3$-Bip(2-Et)-Bip(2-CN)
HA-$(CH_2)_3$-Bip(2-Ipr)-Bip(2-CN)
HA-$(CH_2)_3$-Bip(2-CN)-Bip(2-Me)
HA-$(CH_2)_3$-Bip(2-CN)-Bip
HA-$(CH_2)_3$-Bip(2-CN)-Bip(2-Et)
HA-$(CH_2)_3$-Bip(2-CN)-Bip(2-Ipr)
HA-$(CH_2)_3$-Bip(2-CN)-Bip(2-CN)
HA-$(CH_2)_2$-F-$(CH_2)_2$-Bip(2-Et)-DBip(2-Et)
HA-$(CH_2)_2$-F-$(CH_2)_2$-Bip(2-Et)-DBip(2-Me)
HA-$(CH_2)_5$-Bip(2-Me)-DBip
HA-$(CH_2)_3$-Bip(2-Me)-DBip-R
HA-$(CH_2)_3$-DBip(2-Me)-DBip
HA-$(CH_2)_5$-Bip(2-Me)-DBip(2-Me)
HA-$(CH_2)_5$-DBip(2-Me)-Bip(2-Me)
HA-$(CH_2)_4$-D(Bip)-Bip(2-Et)
HA-$(CH_2)_5$-D(Bip)-Bip(2-Et)
HA-$(CH_2)_4$-Bip(2-Me)-DBip(2-Me)
HA-$(CH_2)_5$-Bip(2-Me)-DBip(2-Me)
HA-$(CH_2)_3$-(N(Me))-DBip-Bip(2-Et)
HA-$(CH_2)_4$-DBip(2-Me)-Bip(2-Et)
HA-$(CH_2)_5$-DBip(2-Me)-Bip(2-Et)
HA-$(CH_2)_3$-(N(Me))-DBip(2-Me)-Bip(2-Et)
HA-$(CH_2)_4$-Bip(2-Me)-DBip
HA-$(CH_2)_5$-Bip(2-Me)-DBip
HA-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Me)
HA-(N(Me))-$(CH_2)_3$-DBip(2-Me)-Bip(2-Et)

HA-(N(Me))-$(CH_2)_3$-DBip-Bip(2-Et)

HA-(N(Me))-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)

HA-(N(Me))-$(CH_2)_3$-Bip(2-Me)-DBip

HAE-$(CH_2)_2$-F-$(CH_2)_2$-Bip(2-Et)-DBip(2-Et)

HAE-$(CH_2)_2$-F-$(CH_2)_2$-Bip(2-Et)-DBip(2-Me)

HAib-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Me)

6. The isolated polypeptide of claim 1 wherein the isolated polypeptide is a compound selected from

HA-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-Aib-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Ha-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

HA-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-Aib-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Ha-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

HA-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-Aib-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-a-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

HAE-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-Aib-E-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

HaE-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AE-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AE-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Des-amino-H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Des-amino-H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

HAEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-Aib-EG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

HaEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Des-amino-H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Des-amino-H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

HAEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-Aib-EGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

HaEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Des-amino-H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

Des-amino-H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH_2

H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-NH-$(CH_2)_6$-CH_3

HA-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-NH_2

H-Aib-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-NH_2

Ha-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-NH_2

H-(N(Me))A-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-Bip(2-Me)-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-Bip(2-Me)-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH_2

Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH_2

Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

HA-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-NH_2

H-Aib-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-NH_2

Ha-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-NH_2

H-(N(Me))A-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Me)-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Me)-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH_2

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH_2

Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH_2

Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH_2

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-NH-$(CH_2)_6$-CH_3

HA-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-Aib-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Ha-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

H-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))A-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

HA-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-Aib-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Ha-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-(N(Me))-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

HA-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-Aib-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Ha-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-(N(Me))-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-N(Me))Aib-(N(Me))-$(CH_2)_4$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

HAE-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-Aib-E-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

HaE-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AE-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AE-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Des-amino-H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Des-amino-H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

H-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))AE-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-E-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

HAEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-Aib-EG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

HaEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AEG-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Des-amino-H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Des-amino-H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

H-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))AEG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-EG-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

HAEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-Aib-EGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

HaEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AEGT-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Des-amino-H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

Des-amino-H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-OH

H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

H-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))AEGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-(N(Me))Aib-EGT-(N(Me))-$(CH_2)_2$-(N(Me))-Bip(2'-Et-4'-OMe)-(N(Me))-4-(2'-Me-Ph)-3-Pyr-Ala-COO-$(CH_2)_6$-CH_3

HA-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-OH

H-Aib-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-OH

Ha-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-OH

H-(N(Me))A-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-OH

H-(N(Me))A-(N(Me))-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-Bip(2-Me)-Bip(2-Me)-OH

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-Bip(2-Me)-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-Bip(2-Me)-OH

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-OH

Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-OH

Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-OH

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Me)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3

HA-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-OH

H-Aib-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-OH

Ha-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-OH

H-(N(Me))A-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-OH

H-(N(Me))A-(N(Me))-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-Bip(2-Et)-Bip(2-Me)-OH

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Me)-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-Bip(2-Me)-OH

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-OH

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-OH

Des-amino-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-OH

Des-amino-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-OH

H-(N(Me))A-(N(Mc))-$(CH_2)_3$-(N(Mc))-Bip(2-Et)-(N(Mc))-Bip(2-Mc)-COO-$(CH_2)_6$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3

H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_{10}$-CH_3

H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_{10}$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_6$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))A-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3

CH_3-$(CH_2)_{10}$-NH-H-(N(Me))Aib-(N(Me))-$(CH_2)_3$-(N(Me))-Bip(2-Et)-(N(Me))-Bip(2-Me)-COO-$(CH_2)_6$-CH_3

HA-$(CH_2)_3$-DVSSYLEGQAAKEFIKELEKLL

HAib-$(CH_2)_3$-DVSSYLEGQAAKEFIKELEKLL

HAibEGTFTSDVSSYLEGQ-$(CH_2)_2$-KELEKLL

HAibEGTFTSDVSSYLEGQ-$(CH_2)_3$-KELEKLL

HAibEGTFTSDVSSYLE-$(CH_2)_2$-FIKELEKLL

HAibEGT-(α-Me)Phe(2-F)-TSDVSSYLE-$(CH_2)_2$-FIKELEKLL

HAib-$(CH_2)_3$-VSSYLE-$(CH_2)_2$-FIKELEKLL

HAib-$(CH_2)_3$-VSSYLE-$(CH_2)_3$-FIKELEKLL

HAib-$(CH_2)_3$-YLE-$(CH_2)_3$-FIKELEKLL

HAib-$(CH_2)_4$-YLE-$(CH_2)_3$-FIKELEKLL

HAib-$(CH_2)_4$-YL-$(CH_2)_3$-FIKELEKLL

HAib-$(CH_2)_4$-Y-$(CH_2)_3$-FIKELEKLL

HAib-$(CH_2)_4$-FIKELEKLL

HAib-$(CH_2)_5$-FIKELEKLL

HAib-$(CH_2)_6$-FIKELEKLL

HAib-$(CH_2)_8$-FIKELEKLL

HAib-$(CH_2)_3$-VSSYLEGQ-$(CH_2)_3$-KELEKLL

HAib-$(CH_2)_3$-VSSYLEG-$(CH_2)_3$-KELEKLL

HAib-$(CH_2)_3$-VSSYLE-$(CH_2)_4$-KELEKLL

HAib-$(CH_2)_3$-SSYLE-$(CH_2)_4$-KELEKLL

HAib-$(CH_2)_3$-SYLE-$(CH_2)_4$-KELEKLL

HAib-$(CH_2)_3$-YLE-$(CH_2)_4$-KELEKLL

HAib-$(CH_2)_3$-YL-$(CH_2)_4$-KELEKLL

HAib-$(CH_2)_3$-Y-$(CH_2)_4$-KELEKLL

HAib-$(CH_2)_5$-KELEKLL

HAib-$(CH_2)_6$-KELEKLL

HAib-$(CH_2)_8$-KELEKLL

7. A pharmaceutical composition comprising compounds as claimed in claims 1-6 prepared according to the processes described herein and a suitable pharmaceutically acceptable carrier(s).
8. The compounds or their pharmaceutical compositions as claimed in claims 1-7, which possess the ability to mimic the biological activity of GLP-1, more preferably mimic the GLP-1R agonist activity.
9. The compounds or their pharmaceutical compositions as claimed in any of the claims 1-7, useful for the treatment or prevention of diseases wherein GLP-1R peptide plays a patho-physiological function.
10. A method of preventing or treating diseases caused by hyperlipidaemia, hypercholesteremia, hyperglycemia, hyperinsulinemia, elevated blood levels of free fatty acids or glycerol, hypertriglyceridemia, wound healing, obesity, impaired glucose tolerance, leptin resistance, insulin resistance, diabetic complications, such as nephropathy, retinopathy, neuropathy and cataracts, comprising administering an effective, non-toxic amount of compound of formula (I) as defined in any preceding claims to a patient in need thereof.
11. The method according to any preceding claims, wherein the disease is type 2 diabetes, impaired glucose tolerance, dyslipidaemia, hypertension, obesity, atherosclerosis, hyperlipidaemia, coronary artery disease, cardiovascular disorders and other diseases wherein insulin resistance is the underlying pathophysiological mechanism.
12. A medicine for treating/reducing any of the disease conditions described in any preceding claims which comprises administering a compound of formula (I), as defined in claims 1-7 and a pharmaceutically acceptable carrier, diluent, excipients or solvate to a patient in need thereof.
13. A medicine for treating/reducing any of the disease conditions described in any preceding claims which comprises administering a compound of formula (I), as defined in claims 1-7 in combination with a suitable DPP IV inhibitor, to a patient in need thereof.
14. Use of compounds of formula (I), alone or in combination with suitable DPP IV inhibitors, their pharmaceutical compositions and medicines containing them as defined in any previous claims as a medicament suitable for the treatment of diseases mentioned in any of the aforesaid claims.