

boxyphenylalanine, β -phenylserine, phenylglycine, α -naphthylalanine, cyclohexylalanine, cyclohexylglycine, tryptophan, aspartic acid, β -phenyl-lower-alkyl aspartate, asparagine, aminomalonic acid, aminomalonic acid monoamide, glutamic acid, γ -phenyl-lower-alkyl glutamate, glutamine, histidine, arginine, lysine, δ -hydroxylysine, ornithine, α,γ -diaminobutyric acid and α,β -diaminopropionic acid;

or the residue, which is bonded via the carbonyl group, of one of the latter amino acids which is N-acylated on an amino nitrogen by one of the previously mentioned acyl radicals,

R_2 and R_3 are, independently of each other, cyclohexyl, cyclohexenyl, phenyl, naphthyl or tetrahydronaphthyl which are unsubstituted or are substituted by one or more radicals selected, independently of each other, from lower alkyl, phenyl, cyanophenyl, phenyl-lower-alkyl, halogen, halo-lower-alkyl, cyano, hydroxyl, lower alkoxy, phenyl-lower-alkoxy, pyridyl-lower-alkoxy, in which pyridyl is bonded via a ring carbon atom, lower-alkoxy-lower-alkoxy, lower-alkoxycarbonyl-lower-alkoxy, carboxyl-lower-alkoxy, hydroxyl-lower-alkoxy having at least two carbon atoms, in which hydroxyl is not bonded in the 1 position, carbamoyl-lower-alkoxy, cyano-lower-alkoxy, lower alkylenedioxy, and phenyl-lower-alkanesulfonyl which is unsubstituted or is substituted in the phenyl radical by one or more radicals selected, independently of each other, from halogen,

R_4 is lower alkyl, cyclohexyl or phenyl,

R_5 is lower alkyl, and

n is 1 or 2,

or salts thereof, provided at least one salt-forming group is present.

2. A compound of the formula I according to claim 1,
in which

R_1 is an acyl radical selected from lower-alkoxy-lower-alkanoyl (including lower-alkoxycarbonyl), in which the lower alkoxy radical is unsubstituted or is substituted by one or more radicals selected, independently of each other, from halogen, phenyl and lower alkoxy, or by a radical selected from piperidiny, pyrrolidiny, tetrahydropyrany,

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tetrahydrofuranyl, thiazolidinyl, thiazolyl, indolyl or 4H-1-benzopyranyl, which are unsubstituted or are substituted by one or more radicals selected, independently of each other, from oxo, hydroxyl, amino, lower alkyl, lower-alkoxycarbonyl and phenyl-lower-alkoxycarbonyl; lower alkanoyl, which is unsubstituted or is substituted piperidinyl, pyrrolidinyl, tetrahydropyranyl, tetrahydrofuranyl, thiazolidinyl, thiazolyl, indolyl, 4H-1-benzopyranyl, piperidinyl, pyrrolidinyl, tetrahydropyranyloxy, tetrahydrofuranyloxy, thiazolidinyloxy, thiazolyloxy, indolyloxy or 4H-1-benzopyranyloxy, which are in each case unsubstituted or substituted by one or more substituents selected, independently of each other, from oxo, hydroxyl, amino, lower alkyl, lower-alkoxycarbonyl and phenyl-lower-alkoxycarbonyl; and arylcarbonyl or heterocyclylcarbonyl which is substituted by heterocyclyl or heterocyclyl-lower-alkyl;

the residue, which is bonded via the carbonyl group, of an amino acid selected from glycine, alanine, 3-aminopropanoic acid, 2-aminobutyric acid, 3-aminobutyric acid, 4-aminobutyric acid, 3-aminopentanoic acid, 4-aminopentanoic acid, 5-aminopentanoic acid, 3-aminohexanoic acid, 4-aminohexanoic acid, 5-aminohexanoic acid, valine, norvaline, leucine, isoleucine, norleucine, serine, homoserine, threonine, methionine, cysteine, phenylalanine, tyrosine, 4-aminophenylalanine, 4-chlorophenylalanine, 4-carboxyphenylalanine, β -phenylserine, phenylglycine, α -naphthylalanine, cyclohexylalanine, cyclohexylglycine, tryptophan, aspartic acid, asparagine, aminomalonic acid, aminomalonic acid monoamide, glutamic acid, glutamine, histidine, arginine, lysine, δ -hydroxylysine, ornithine, α,γ -diaminobutyric acid and α,β -diaminopropionic acid;

or the residue, which is bonded via the carbonyl group, of one of the amino acids mentioned immediately above, which residue is N-acylated on the amino nitrogen by one of the abovementioned acyl radicals,

R_2 and R_3 are, independently of each other, cyclohexyl, cyclohexenyl, phenyl, naphthyl or tetrahydronaphthyl which are unsubstituted or substituted by one or more radicals which are selected, independently of each other, from lower alkyl, phenyl-lower-alkyl, halogen, halo-lower-alkyl, cyano, hydroxyl, lower alkoxy, phenyl-lower-alkoxy, pyridyl-lower-alkoxy, lower-alkoxy-lower-alkoxy, lower-alkoxycarbonyl-lower-alkoxy, carboxy-lower-alkoxy, hydroxy-lower-alkoxy having at least 2 carbon atoms, in which hydroxyl is not bonded in the 1 position, carbamoyl-lower-alkoxy, cyano-lower-alkoxy, lower-alkylenedioxy, and phenyl-lower-alkanesulfonyl which is unsubstituted or is substituted in the phenyl radical by one or more radicals selected, independently of each

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other, from halogen,

R₄ is lower alkyl, cyclohexyl or phenyl,

R₅ is lower alkyl, and

n is 1 or 2,

or salts thereof, provided at least one salt-forming group is present.

3. A compound of the formula I according to claim 1, in which

R₁ is an acyl radical selected from lower-alkoxy-lower-alkanoyl, lower-alkoxy-lower-alkanoyl which is substituted in the lower alkoxy radical, once or more than once, by halogen, by lower alkoxy or by pyrrolidinyl which is unsubstituted or substituted by oxo, N-lower-alkoxycarbonyl-piperidinyl-lower-alkanoyl, pyrrolidinyl-lower-alkanoyl which is substituted by hydroxyl on a carbon atom and/or phenyl-lower-alkoxycarbonyl on the nitrogen atom, aminothiazolidinyl-lower-alkanoyl, thiazolyl-lower-alkanoyl, indolyl-lower-alkanoyl, 4H-1-benzopyranyl-lower-alkanoyl which is substituted by oxo, N-lower-alkylpiperidinyl-lower-alkanoyl, tetrahydropyranyloxy-lower-alkanoyl, tetrahydrofuranyloxy-lower-alkanoyl, morpholinyl-lower-alkylbenzoyl, lower-alkylpiperazinylpyridylcarbonyl, phenyl-lower-alkanoyl which is substituted by hydroxyl and lower alkyl and which has one hydroxyl substituent and one lower alkyl substituent in each case on the phenyl ring, and phenylsulfonyl which is substituted by amino, nitro, amino and lower alkyl or nitro and lower alkyl;

the residue, which is bonded via the carboxyl group, of an amino acid selected from valine, norvaline, leucine, isoleucine and norleucine and, in addition, from serine, homoserine, threonine, methionine, cysteine, phenylalanine, tyrosine, 4-aminophenylalanine, 4-chlorophenylalanine, 4-carboxyphenylalanine, β-phenylserine, phenylglycine, α-naphthylalanine, cyclohexylalanine, cyclohexylglycine, tryptophan, asparagine, aminomalonic acid monoamide, glutamic acid, glutamine, histidine, arginine, lysine, δ-hydroxylysine and ornithine;

or the residue, which is bonded via the carbonyl group, of one of the amino acids



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mentioned immediately above, which residue is N-acylated on the amino nitrogen by one of the abovementioned acyl radicals;

R_2 and R_3 are, independently of each other, selected from cyclohexyl, cyclohexenyl, phenyl, biphenyl, (cyanophenyl)phenyl, phenyl-lower-alkoxyphenyl, difluorophenyl, cyanophenyl, lower-alkoxyphenyl, tri-lower-alkoxyphenyl, lower-alkoxy-lower-alkoxyphenyl, lower-alkylenedioxyphenyl in which the lower-alkylenedioxy radical is bonded via its two oxygen atoms to two adjacent carbon atoms of the phenyl ring, pyridyl-lower-alkoxyphenyl in which pyridyl is bonded via a ring carbon atom, from 4-lower-alkoxy-2-fluorophenyl, 4-fluoro-2-lower-alkoxyphenyl, 4-lower-alkoxy-2-hydroxyphenyl, phenyl which is substituted up to three times by lower alkyl and lower alkoxy, phenyl-lower-alkylphenyl, fluorophenyl, hydroxyphenyl, di-lower-alkoxyphenyl, tetrahydronaphthyl, halonaphthyl, cyanonaphthyl, lower-alkoxynaphthyl and dihalophenyl-lower-alkanesulfonylphenyl;

R_4 is lower alkyl, cyclohexyl or phenyl;

R_5 is lower alkyl; and

n is 2 or is 1,

or a salt thereof, provided at least one salt-forming group is present.

4. A compound of the formula I according to claim 1, in which

R_1 is an acyl radical selected from lower-alkoxy-lower-alkanoyl (including lower-alkoxycarbonyl); lower-alkoxy-lower-alkanoyl (including lower-alkoxycarbonyl) which is substituted in the lower-alkoxy radical, once or more than once, by halogen, by lower alkoxy or by pyrrolidinyl which is unsubstituted or substituted by oxo; N-lower-alkoxycarbonylpiperidinyl-lower-alkanoyl; pyrrolidinyl-lower-alkanoyl which is substituted by hydroxyl on a carbon atom and/or phenyl-lower-alkoxycarbonyl on the nitrogen atom; aminothiazolidinyl-lower-alkanoyl; thiazolyl-lower-alkanoyl; indolyl-lower-alkanoyl; 4H-1-benzopyranyl-lower-alkanoyl which is substituted by oxo; N-lower-alkylpiperidinyl-lower-alkanoyl; tetrahydropyranyloxy-lower-alkanoyl; tetrahydrofuranyloxy-lower-alkanoyl; morpholinyl-lower-alkylbenzoyl; and lower-alkylpiperazinylpyridylcarbonyl;

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the residue, which is bonded via the carboxyl group, of an amino acid selected from valine, norvaline, leucine, isoleucine and norleucine, and, in addition, from serine, homoserine, threonine, methionine, cysteine, phenylalanine, tyrosine, 4-aminophenylalanine, 4-chlorophenylalanine, 4-carboxyphenylalanine, β -phenylserine, phenylglycine, α -naphthylalanine, cyclohexylalanine, cyclohexylglycine, tryptophan, asparagine, aminomalonic acid monoamide, glutamic acid, glutamine, histidine, arginine, lysine, δ -hydroxylysine and ornithine; with valine being particularly preferred;

or the residue, which is bonded via the carbonyl group, of one of the amino acids mentioned immediately above, which residue is N-acylated on the amino nitrogen by one of the previously mentioned acyl radicals;

R_2 and R_3 are, independently of each other, selected from cyclohexyl, cyclohexenyl, phenyl, phenyl-lower-alkoxyphenyl, difluorophenyl, cyanophenyl, lower-alkoxyphenyl, tri-lower-alkoxyphenyl, lower-alkoxy-lower-alkoxyphenyl, lower-alkylenedioxyphenyl in which the lower-alkylenedioxy radical is bonded via its two oxygen atoms to two adjacent carbon atom of the phenyl ring, pyridyl-lower-alkoxyphenyl in which pyridyl is bonded via a ring carbon atom, 4-lower-alkoxy-2-fluorophenyl, 4-fluoro-2-lower-alkoxyphenyl, 4-lower-alkoxy-2-hydroxyphenyl, phenyl which is substituted up to three times by lower-alkyl and lower-alkoxy, phenyl-lower-alkylphenyl, fluorophenyl, hydroxyphenyl, di-lower-alkoxyphenyl, tetrahydronaphthyl, halonaphthyl, cyanonaphthyl, lower-alkoxynaphthyl and dihalophenyl-lower-alkanesulfonylphenyl;

R_4 is lower alkyl, cyclohexyl or phenyl;

R_5 is lower alkyl; and

n is 2 or 1,

or a salt thereof, provided at least one salt-forming group is present.

5. A compound of the formula I according to any one of claims claim 1 to 4, in which R_1 , R_2 , R_4 , R_5 , R_6 and n have the meanings specified in one of claims 1 to 4 and R_3 is 2,3,4-lower-alkoxyphenyl, or a salt thereof, provided at least one salt-forming group is present.



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6. A compound of the formula I according to claim 1, in which

R_1 is an acyl radical selected from lower-alkoxy-lower-alkanoyl (including lower-alkoxycarbonyl); lower-alkoxy-lower-alkanoyl (including lower-alkoxycarbonyl) which is substituted in the lower alkoxy radical, once or more than once, by halogen, by lower alkoxy or by pyrrolidinyl which is unsubstituted or substituted by oxo; N-lower-alkoxycarbonylpyrrolidinyl-lower-alkanoyl; pyrrolidinyl-lower-alkanoyl which is substituted by hydroxyl on a carbon atom and/or phenyl-lower-alkoxycarbonyl on the nitrogen atom; aminothiazolidinyl-lower-alkanoyl; thiazolyl-lower-alkanoyl; indolyl-lower-alkanoyl; 4H-1-benzopyranyl-lower-alkanoyl which is substituted by oxo; N-lower-alkylpiperidinyl-lower-alkanoyl; tetrahydropyranyloxy-lower-alkanoyl; tetrahydrofuranyloxy-lower-alkanoyl; morpholinyl-lower-alkylbenzoyl; and lower-alkylpiperazinylpyridylcarbonyl;

the residue, which is bonded via the carboxyl group, of an amino acid selected from valine, norvaline, leucine, isoleucine and norleucine, and, in addition, from serine, homoserine, threonine, methionine, cysteine, phenylalanine, tyrosine, 4-aminophenylalanine, 4-chlorophenylalanine, 4-carboxyphenylalanine, β -phenylserine, phenylglycine, α -naphthylalanine, cyclohexylalanine, cyclohexylglycine, tryptophan, asparagine, aminomalonic acid monoamide, glutamic acid, glutamine, histidine, arginine, lysine, δ -hydroxylysine and ornithine; with valine being particularly preferred;

or the residue, which is bonded via the carbonyl group, of one of the amino acids mentioned immediately above, which residue is N-acylated on the amino nitrogen by one of the abovementioned acyl radicals;

R_2 and R_3 are present in the following combinations:

R_2 = phenyl and R_3 = cyanophenyl; R_2 = phenyl and R_3 = 2,4-difluorophenyl;
 R_2 = phenyl and R_3 = 4-lower-alkoxyphenyl; R_2 = 4-(lower-alkoxy-lower-alkoxy)phenyl and R_3 = 4-(phenyl-lower-alkoxy)phenyl; R_2 = cyclohexyl and R_3 = 4-lower-alkoxyphenyl; R_2 = phenyl and R_3 = phenyl; R_2 = phenyl and R_3 = 4-((pyridin-2-yl- or pyridin-3-yl)-lower-alkoxy)phenyl; R_2 = phenyl and R_3 = 3,4-lower-alkylenedioxyphenyl; R_2 = cyclohexyl and R_3 = 4-(lower-alkoxy-lower-alkoxy)phenyl; or R_2 = phenyl and R_3 = 2,3,4-tri-lower-alkoxyphenyl;

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R₄ is lower alkyl, cyclohexyl or phenyl;

R₅ is lower alkyl; and

n is 2 or 1,

or a salt thereof, provided at least one salt-forming group is present.

7. A compound of the formula I according to claim 1, in which

R₁ is selected from

ethoxycarbonyl, tert-butoxycarbonyl, 2,2,2-trifluoroethoxycarbonyl, 2-(methoxy)ethoxycarbonyl, 2-methoxy-1-(R,S)-methylethoxycarbonyl, 1,1-dimethyl-2-methoxyethoxycarbonyl, 5(S)-2-oxopyrrolidinylmethoxycarbonyl, 1-ethoxycarbonylpiperidin-4-ylcarbonyl, trans-(L)-4-hydroxypropyl, N-(benzyloxycarbonyl)-trans-(L)-4-hydroxypropyl, (L)-thiazolidin-4-ylcarbonyl, indol-2-ylcarbonyl, 4H-1-benzopyran-2-ylcarbonyl, N-methylpiperidinylloxycarbonyl, tetrahydropyran-2(R,S)-ylcarbonyl, O-(tetrahydropyran-4-yl)-(L)-lactoyl (= 2(S)-(tetrahydropyran-4-yloxy)propionyl), 3(S)-tetrahydrofuran-2-ylloxycarbonyl, 2-aminothiazol-4-ylacetyl, 6-(4-methylpiperazin-1-yl)-pyridin-3-ylcarbonyl, 4-(morpholin-4-ylmethyl)benzoyl, N-methoxycarbonyl-(L)-valyl, N-[(L)-thiazolidin-4-ylcarbonyl]-(L)-valyl, 3-hydroxy-2-methylbenzoyl, 4-nitrobenzenesulfonyl, 4-aminobenzenesulfonyl, 2-methyl-4-nitrobenzenesulfonyl and 4-amino-2-methylbenzenesulfonyl;

R₂ and R₃ are selected from cyclohexyl, cyclohexen-1-yl, phenyl, 4-biphenyl, 2'-cyanobiphenyl-4-yl, 4-(benzyloxy)-phenyl, 2,4-difluorophenyl, 4-cyanophenyl, 2-, 3- or 4-methoxyphenyl, 4-isobutyloxyphenyl, trimethoxyphenyl, 4-(2-methoxyethoxy)phenyl, 3,4-methylenedioxyphenyl, 4-(pyridin-2- or pyridin-3-yl-methoxy)phenyl, 4-methoxy-2-fluorophenyl, 4-fluoro-2-methoxyphenyl, 4-methoxy-2-hydroxyphenyl, 4-methoxy-2,3-dimethylphenyl, 4-(2-phenylethyl)phenyl, 2-fluorophenyl, 4-hydroxyphenyl, dimethoxyphenyl, 5,6,7,8-tetrahydro-1-naphthyl, 4-fluoronaphthyl, 4-cyanonaphthyl, 4-lower-alkoxynaphthyl and 4-(2,6-dichlorobenzylsulfonyl)phenyl;

R₄ is isopropyl, cyclohexyl or phenyl;



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R₅ is methyl, ethyl or n-propyl; and

n is 2 or is 1;

or a salt thereof, provided at least one salt-forming group is present.

8. A compound of the formula I according to claim 1, in which

R₁ is selected from

tert-butoxycarbonyl, 2,2,2-trifluoroethoxycarbonyl, 2-(methoxy)ethoxycarbonyl, 5(S)-2-oxo-pyrrolidinylmethoxycarbonyl, 1-ethoxycarbonylpiperidin-4-ylcarbonyl, trans-(L)-4-hydroxypropyl, N-(benzyloxycarbonyl)-trans-(L)-4-hydroxypropyl, (L)-thiazolidin-4-ylcarbonyl, indol-2-ylcarbonyl, 4H-1-benzopyran-2-ylcarbonyl, N-methylpiperidin-2-ylcarbonyl, tetrahydropyran-2(R,S)-ylcarbonyl, O-(tetrahydropyran-4-yl)-(L)-lactoyl (= 2(S)-(tetrahydropyran-4-yloxy)propionyl), 3(S)-tetrahydrofuran-2-ylcarbonyl, 2-aminothiazol-4-ylacetyl, 6-(4-methylpiperazin-1-yl)pyridin-3-ylcarbonyl, 4-(morpholin-4-ylmethyl)benzoyl, N-methoxycarbonyl-(L)-valyl and N-[(L)-thiazolidin-4-ylcarbonyl]-(L)-valyl;

R₂ and R₃ are selected from cyclohexyl, cyclohexen-1-yl, phenyl, 4-(benzyloxy)phenyl, 2,4-difluorophenyl, 4-cyanophenyl, 2-, 3- or 4-methoxyphenyl, 4-isobutyloxyphenyl, trimethoxyphenyl, 4-(2-methoxyethoxy)phenyl, 3,4-methylenedioxyphenyl, 4-(pyridin-2- or pyridin-3-ylmethoxy)phenyl; 4-methoxy-2-fluorophenyl, 4-fluoro-2-methoxyphenyl, 4-methoxy-2-hydroxyphenyl, 4-methoxy-2,3-dimethylphenyl, 4-(2-phenylethyl)phenyl, 2-fluorophenyl, 4-hydroxyphenyl, Dimethoxyphenyl, 5,6,7,8-tetrahydro-1-naphthyl, 4-fluoronaphthyl, 4-cyanonaphthyl, 4-lower-alkoxynaphthyl and 4-(2,6-dichlorobenzylsulfonyl)phenyl,

R₄ is isopropyl, cyclohexyl or phenyl;

R₅ is ethyl or methyl; and

n is 2 or is 1;

or a salt thereof, provided at least one salt-forming group is present.

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9. A compound of the formula I according to claim 1, in which

R₁ is selected from

tert-butoxycarbonyl, 2,2,2-trifluoroethoxycarbonyl, 2-(methoxy)ethoxycarbonyl, 5(S)-2-oxo-pyrrolidinylmethoxycarbonyl, 1-ethoxycarbonylpiperidin-4-ylcarbonyl, trans-(L)-4-hydroxypropyl, N-(benzyloxycarbonyl)-trans-(L)-4-hydroxypropyl, (L)-thiazolidin-4-ylcarbonyl, indol-2-ylcarbonyl, 4H-1-benzopyran-2-ylcarbonyl, N-methylpiperidinylloxycarbonyl, tetrahydropyran-2(R,S)-ylcarbonyl, O-(tetrahydropyran-4-yl)-(L)-lactoyl (= 2(S)-(tetrahydropyran-4-yloxy)propionyl), 3(S)-tetrahydrofuran-2-ylloxycarbonyl, 2-aminothiazol-4-ylacetyl, 6-(4-methylpiperazin-1-yl)pyridin-3-ylcarbonyl, 4-(morpholin-4-ylmethyl)benzoyl, N-methoxycarbonyl-(L)-valyl and N-[(L)-thiazolidin-4-ylcarbonyl]-(L)-valyl;

R₂ and R₃ are present in the following combinations:

R₂ = phenyl and R₃ = 2,3,4-trimethoxyphenyl; R₂ = cyclohexyl and R₃ = 2,3,4-trimethoxyphenyl; R₂ = phenyl and R₃ = 4-methoxyphenyl; or R₂ = cyclohexyl and R₃ = 4-methoxyphenyl;

R₄ is isopropyl, cyclohexyl or phenyl;

R₅ is ethyl or methyl; and

n is 2 or is 1;

or a salt thereof, provided at least one salt-forming group is present.

10. A compound of the formula I according to claim 1, in which

R₁ is selected from

tert-butoxycarbonyl, 2,2,2-trifluoroethoxycarbonyl, 2-(methoxy)ethoxycarbonyl, 5(S)-2-oxopyrrolidinylmethoxycarbonyl, 1-ethoxycarbonylpiperidin-4-ylcarbonyl, trans-(L)-4-hydroxypropyl, N-(benzyloxycarbonyl)-trans-(L)-4-hydroxypropyl, (L)-thiazolidin-4-ylcarbonyl, indol-2-ylcarbonyl, 4H-1-benzopyran-2-ylcarbonyl, N-methylpiperidinylloxycarbonyl, tetrahydropyran-2(R,S)-ylcarbonyl, O-(tetrahydropyran-4-yl)-(L)-lactoyl (= 2(S)-(tetrahydropyran-4-yloxy)propionyl), 3(S)-tetrahydrofuran-2-ylloxycarbonyl, 2-aminothiazol-4-ylacetyl, 6-(4-methylpiperazin-1-yl)pyridin-3-ylcarbonyl, 4-(morpholin-4-ylmethyl)benzoyl, N-methoxycarbonyl-(L)-valyl and N-[(L)-thiazolidin-4-yl-



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carbonyl]-(L)-valyl;

R_2 and R_3 are present in the following combinations:

R_2 = phenyl and R_3 = 2,3,4-trimethoxyphenyl; or R_2 = cyclohexyl and R_3 = 2,3,4-trimethoxyphenyl;

R_4 is isopropyl, cyclohexyl or phenyl;

R_5 is ethyl or methyl; and

n is 2 or is 1;

or a salt thereof, provided at least one salt-forming group is present.

11. A compound of the formula I according to claim 1, in which

R_1 is lower-alkoxycarbonyl or lower-alkoxycarbonyl which is substituted up to three times by halogen,

R_2 and R_3 appear in the following combinations:

R_2 = phenyl and R_3 = cyanophenyl;

R_2 = phenyl and R_3 = difluorophenyl;

R_2 = phenyl and R_3 = 4-lower-alkoxyphenyl;

R_2 = 4-(lower-alkoxy-lower-alkoxy)phenyl and R_3 = 4-phenyl-lower-alkoxyphenyl;

R_2 = cyclohexyl and R_3 = 4-lower-alkoxyphenyl;

R_2 = phenyl and R_3 = phenyl;

R_2 = phenyl and R_3 = 4-phenyl-lower-alkoxyphenyl;

R_2 = phenyl and R_3 = 4-(pyridin-3-yl-lower-alkoxy)phenyl;

R_2 = phenyl and R_3 = 3,4-lower-alkylenedioxyphenyl;

R_2 = phenyl and R_3 = 2,3,4-tri-lower-alkoxyphenyl; or

R_2 = cyclohexyl and R_3 = 4-(lower-alkoxy-lower-alkoxy)phenyl;

R_4 is isopropyl;

R_5 is methyl; and

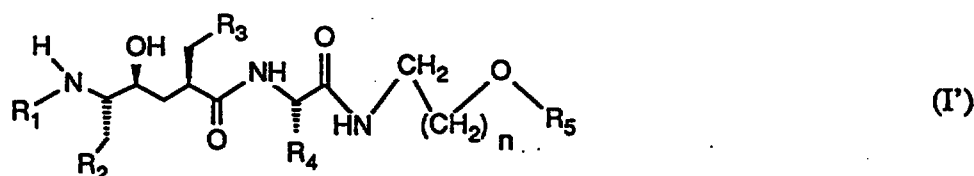
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n is 1.

12. A compound according to any one of claims 1 to 11, which is of the formula I', which comes under formula I,



in which the radicals have the meanings specified in each case for compounds of the formula I.

13. A compound of the formula I' according to claim 12, in which

R₁ is lower-alkoxycarbonyl;

R₂ is phenyl and R₃ is 4-lower-alkoxyphenyl or 2,3,4-tri-lower-alkoxyphenyl;

R₄ is isopropyl;

R₅ is methyl;

and n is 1.

14. A compound of the formula I according to claim 1, said compound being selected from the compounds with the following names:

5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(p-cyanophenyl)methyl]-hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;

5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,4-difluoro-phenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;

5(S)-(Boc-amino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;

5(S)-(2,2,2-trifluoroethoxycarbonylamino)-4(S)-(hydroxy)-6-cyclohexyl-2(R)-[(4-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;



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5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-(phenylmethyl)hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(p-(3-pyridylmethoxy)phenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(3,4-methylenedioxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,3,4-trimethoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;
5(S)-(Boc-amino)-4(S)-hydroxy-6-[p-(2-methoxyethoxy)phenyl]-2(R)-[(p-benzyloxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;
5(S)-(Boc-amino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(4-{2-(methoxy)ethoxy}phenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;
5(S)-(2,2,2-trifluoroethoxycarbonylamino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(4-{2-(methoxy)ethoxy}phenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,3,4-trimethoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,3,4-trimethoxyphenyl)methyl]hexanoyl-(L)-Val-N-(3-methoxypropyl)amide;
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,3,4-trimethoxyphenyl)methyl]hexanoyl-(L)-Val-N-(3-ethoxypropyl)amide;
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,3,4-trimethoxyphenyl)methyl]hexanoyl-(L)-Val-N-(3-(n-propyloxy)propyl)amide;
5(S)-(p-nitrobenzenesulfonylamino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,3,4-trimethoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide; and
5(S)-(p-aminobenzenesulfonylamino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,3,4-trimethoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide;
or a salt thereof where a salt-forming group is present.

15. A compound of formula I according to claim 1 having the name

5(S)-(Boc-amino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(2,3,4-trimethoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide.

16. A compound of formula I according to claim 1 having the name

5(S)-(3-hydroxy-2-methylphenylcarbonylamino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,3,4-trimethoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide.



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17. A compound of the formula I according to claim 1, which is selected from the following compounds:

- 5(S)-(Boc-amino)-4(S)-hydroxy-6-(p-benzyloxyphenyl)-2(R)-[(p-benzyloxyphenyl)-methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(p-cyanophenyl)methyl]-hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(o-fluorophenyl)methyl]-hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-{[p-(2-phenylethyl)phenyl]methyl}hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-{[p-(2,6-dichlorobenzylsulfonyl)phenyl]methyl}hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-hydroxy-6-(p-benzyloxyphenyl)-2(R)-[(p-methoxyphenyl)-methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-hydroxy-6-(p-hydroxyphenyl)-2(R)-[(p-methoxyphenyl)methyl]-hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-hydroxy-6-(p-methoxyphenyl)-2(R)-[(p-methoxyphenyl)methyl]-hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-hydroxy-6-(p-(isobutoxy)phenyl)-2(R)-[(p-methoxyphenyl)-methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-hydroxy-6-(p-methoxyphenyl)-2(R)-(phenylmethyl)-hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-{[(1-ethoxycarbonylpiperidin-4-yl)carbonyl]amino}-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-hydroxy-6-(p-methoxyphenyl)-2(R)-(cyclohexylmethyl)hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-hydroxy-6-(4-methoxyphenyl)-2(R)-[cyclohexen-1-ylmethyl]-hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(4-benzyloxyphenyl)-methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-(hydroxy)-6-cyclohexyl-2(R)-[(4-hydroxyphenyl)methyl]-hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-(hydroxy)-6-cyclohexyl-2(R)-[(4-methoxyphenyl)-methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
- 5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-(phenylmethyl)-hexanoyl-(L)-[(cyclo-

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hexyl)Gly]-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-(phenylmethyl)hexanoyl-(L)-
[(phenyl)Gly]-N-(2-methoxyethyl)amide,
5(S)-[(1-methyl-4-piperidinylloxycarbonyl)amino]-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-
methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(3(S)-tetrahydrofuryloxycarbonylamino)-4(S)-hydroxy-6-cyclohexyl-
2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(2(R,S)-tetrahydropyranylmethoxycarbonylamino)-4(S)-hydroxy-6-cyclo-
hexyl-2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(5(S)-2-oxopyrrolidinylmethoxycarbonylamino)-4(S)-hydroxy-6-cyclo-
hexyl-2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(2-methoxyethoxycarbonylamino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-methoxy-
phenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-((L)-thiazolidin-4-ylcarbonylamino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-methoxy-
phenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(4-oxo-4H-1-benzopyran-2-ylcarbonylamino)-4(S)-hydroxy-6-cyclohexyl-
2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(indolyl-2-carbonylamino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-methoxyphenyl)-
methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(methoxycarbonyl-(L)-Val-amino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-methoxy-
phenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-([N-((L)-thiazolidin-4-ylcarbonyl)-(L)-Val]-amino)-4(S)-hydroxy-6-cyclohexyl-
2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(benzyloxycarbonyl-(L)-4-[trans-hydroxypropyl]amino)-4(S)-hydroxy-6-cyclohexyl-
2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-((L)-[trans-4-hydroxypropyl]-amino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-methoxy-
phenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(2-amino-4-thiazolylacetyl-amino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-methoxy-
phenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(6-(4-methyl-1-piperazinyl)-3-pyridylcarbonylamino)-4(S)-hydroxy-6-cyclo-
hexyl-2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(4-(4-morpholinylmethyl)benzoylamino)-4(S)-hydroxy-6-cyclohexyl-
2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(O-[4-tetrahydropyranyl]-(L)-lactoylamino)-4(S)-hydroxy-6-cyclohexyl-
2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(p-benzyloxyphenyl)-

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methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(p-hydroxyphenyl)-
methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(p-isobutoxyphenyl)methyl]-
hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(p-(2-pyridylmethoxy)phenyl)-
methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(3,4-dimethoxyphenyl)methyl]-
hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(3-methoxyphenyl)methyl]-
hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(3,4,5-trimethoxyphenyl)-
methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,4-dimethoxyphenyl)-
methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(2-methoxyphenyl)methyl]-
hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,3-dimethyl-4-methoxyphenyl)-
methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,4,5-trimethoxyphenyl)-
methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,4,6-trimethoxy-
phenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(5,6,7,8-tetrahydro-1-naphthyl)-
methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,5-dimethoxyphenyl)-
methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(2,6-dimethoxyphenyl)methyl]-
hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(4-methoxy-1-naphthyl)-
methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(4-cyano-1-naphthyl)-
methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(4-fluoro-1-naphthyl)-methyl]-
hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-methoxy-phenyl)methyl]-

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hexanoyl-(L)-Ala-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-[p-(2-methoxyethoxy)phenyl]-2(R)-[(p-hydroxy-phenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-[p-(2-methoxyethoxy)phenyl]-2(R)-[(p-methoxy-phenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide and
5(S)-(Boc-amino)-4(S)-hydroxy-6-[p-(2-methoxyethoxy)phenyl]-2(R)-[(p-(2-methoxyethoxy)phenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide, or a salt thereof, provided at least one salt-forming group is present.

18. A compound of the formula I according to claim 1, which is selected from the following compounds:

5(S)-(2-methoxy-1(R,S)-methylethoxycarbonylamino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-[(cyclohexyl)Gly]-N-(2-methoxyethyl)amide,
5(S)-(ethoxycarbonyl-(L)-Val-amino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(1,1-dimethyl-2-methoxyethoxycarbonylamino)-4(S)-hydroxy-6-cyclohexyl-2(R)-[(p-methoxyphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-phenyl-2(R)-[(4-biphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-(p-benzyloxyphenyl)-2(R)-[(4-biphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-(p-hydroxyphenyl)-2(R)-[(4-biphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-(p-methoxyphenyl)-2(R)-[(4-biphenyl)methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-(p-benzyloxyphenyl)-2(R)-[[(2'-cyano-biphenyl)-4-yl]-methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-(p-hydroxyphenyl)-2(R)-[[(2'-cyanobiphenyl)-4-yl]-methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide,
5(S)-(Boc-amino)-4(S)-hydroxy-6-(p-methoxyphenyl)-2(R)-[[(2'-cyanobiphenyl)-4-yl]-methyl]hexanoyl-(L)-Val-N-(2-methoxyethyl)amide and
5(S)-(3-hydroxy-2-methylphenylcarboxyamino)-4(S)-hydroxy-6-(p-methoxyphenyl)-2(R)-[[(2'-cyanobiphenyl)-4-yl]methyl]hexanoyl-(L)-Val-N-(2-methoxy-

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ethyl)amide,

or a salt thereof, provided at least one salt-forming group is present.

19. A compound of the formula I according to any one of claims 1 to 18, for use in a process for the diagnostic or therapeutic treatment of the human or animal body.

20. A pharmaceutical preparation containing a compound of the formula I, or a pharmaceutically utilizable salt thereof, according to any one of claims 1 to 18, together with a pharmaceutically utilizable carrier material.

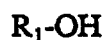
21. Use of a compound of the formula I, or of a pharmaceutically utilizable salt thereof, according to any one of claims 1 to 18, for preparing a pharmaceutical preparation for the prophylaxis or treatment of a retroviral disease.

22. A product which comprises a) at least one compound of the formula I according to any one of claims 1 to 18, or a pharmaceutically acceptable salt thereof, provided a salt-forming group is present, and b) one, two or more other active compounds, which are effective against retroviruses, in the presence or absence of one or more pharmaceutically acceptable carrier materials, as a combination preparation for simultaneous or chronologically staggered use within a period of time which is small enough for the active compounds both of component a) and of component b) to be present simultaneously in the patient, for treating a retroviral disease which responds to such active compounds.

23. A product according to claim 22 for use in a process for the therapeutic treatment of the human or animal body.

24. A process for preparing a compound of the formula I according to claim 1, which comprises

a) condensing an acid of the formula



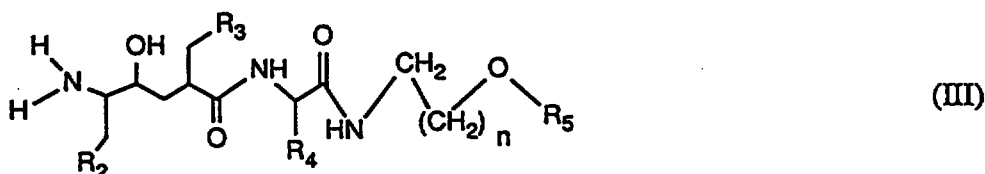
(II)

or a reactive acid derivative thereof, in which R_1 has the same meanings as R_1 in compounds of the formula I, with an amino compound of the formula



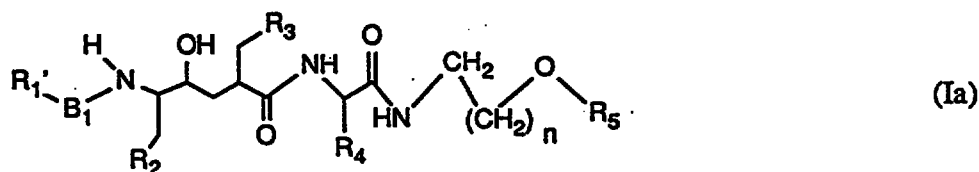
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or a reactive derivative thereof, in which n and the radicals have the meanings specified for compounds of the formula I, with free functional groups, with the exception of those participating in the reaction, being present, if necessary, in protected form in the starting materials of the formulae II and III, and eliminating protective groups which are present, or

b) for preparing a compound of the formula



in which B₁ is a bivalent residue of an amino acid, as defined under formula I, which is bonded via the carbonyl group and the amino group, and R₁' is one of the radicals defined for R₁ under formula I, apart from an unacylated or N-acylated amino acid residue as defined under formula I, so that B₁ and R₁', together, are a residue, which is bonded via its carbonyl group, of a N-acylated amino acid, as defined for R₁ under formula I, and n and the remaining radicals have the meanings specified for compounds of the formula I, condensing a carboxylic acid of the formula

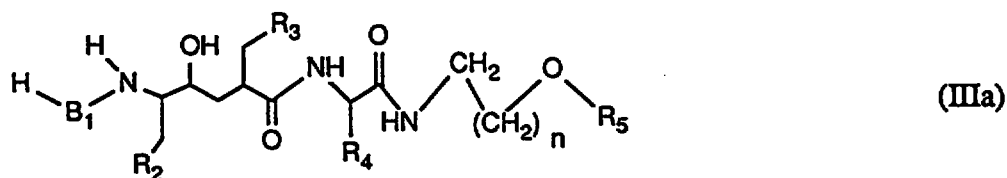


or a reactive acid derivative thereof, in which R₁' can be a radical as defined for R₁ in compounds of the formula I apart from a residue of an unacylated or N-acylated amino acid which is bonded via its carbonyl group, with an amino compound of the formula



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or a reactive derivative thereof, in which B_1 has the meanings specified immediately above and n and the remaining radicals have the meanings specified for compounds of the formula I, with free functional groups, with the exception of those participating in the reaction, being present, if necessary, in protected form in the starting materials of the formulae IIIa and IV, and protective groups which are present being eliminated, or

c) condensing a carboxylic acid of the formula



or a reactive derivative thereof, in which the radicals have the meanings specified for compounds of the formula I, with an amino compound of the formula



or a reactive derivative thereof, in which n and the radicals have the meanings specified for compounds of the formula I, with free functional groups, with the exception of those participating in the reaction, being present, if necessary, in protected form in the starting materials of the formulae V and VI, and protective groups which are present being eliminated, or

d) condensing a carboxylic acid of the formula

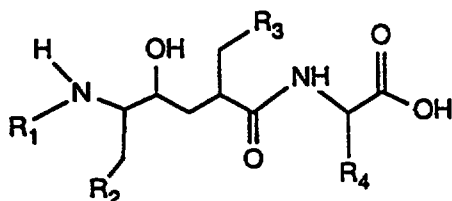
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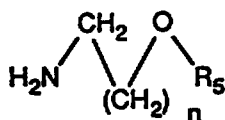


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(VII)

or a reactive derivative thereof, in which the radicals have the meanings specified for compounds of the formula I, with an amino compound of the formula

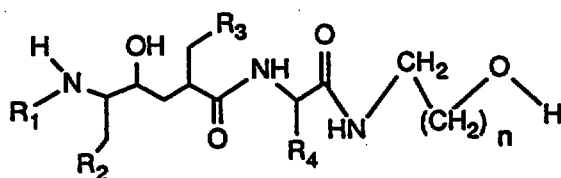


(VIII)

or a reactive derivative thereof, in which n and R₅ have the meanings specified for compounds of the formula I, with free functional groups, with the exception of those participating in the reaction, being present, if required, in protective form in the starting materials of the formulae VII and VIII, and protective groups which are present being eliminated if desired, or

e) either

(i) etherifying a hydroxy compound of the formula



(IX)

or its alcoholate salt, in which n and the radicals have the meanings specified for compounds of the formula I, with a compound of the formula

W₁-R₆

(X),



in which R_6 has the meanings specified for compounds of the formula I and W_1 is a leaving group, or

(ii) etherifying a reactive derivative of the hydroxy compound of the formula IX with a compound of the formula



or its alcoholate salt, in which R_6 is defined as immediately above,

with free functional groups, with the exception of those participating in the reaction, being present, if necessary, in protected form in the starting materials of the formulae IX, X and Xa and protective groups which are present being eliminated, or

f) eliminating protective groups which are present in a compound of the formula I, in which the substituents are as defined above, with the proviso that in the compound of the formula I concerned at least one functional group is protected by protective groups,

with it being possible, in the specified process steps a) to f), if not already specifically mentioned, for starting materials also to be employed in the form of salts, provided salt-forming groups are present,

and/or if desired, a compound of the formula I, which is obtained by one of the abovementioned processes a) to f) and which has at least one salt-forming group, into its salt, and/or converting an obtainable salt into the free compound or into another salt, and/or resolving isomeric mixtures, which may be obtainable, of compounds of the formula I, and/or transforming a novel compound of the formula I into another novel compound of the formula I.

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