Claims

1. A pharmaceutical composition containing at least one FGF-21 (fibroblast growth factor 21) compound and at least one GLP-1R (glucagon-like peptide-1 receptor) agonist.

2. The pharmaceutical composition of claim 1, wherein the composition further contains at least one anti-diabetic drug and/or at least one DPP-4 (dipeptidyl peptidase-4) inhibitor.

3. The pharmaceutical composition of claim 1 or 2, wherein the FGF-21 compound(s), the GLP-1R agonist(s), optionally the anti-diabetic drug(s) and optionally the DPP-4 inhibitor are combined in one formulation or contained in several formulations.

4. The pharmaceutical composition of claim 3, wherein the formulations of the FGF-21 compound(s), the GLP-1R agonist(s), optionally the anti-diabetic drug(s) and optionally the DPP-4 inhibitor are suitable for simultaneous or subsequent administration(s).

5. The pharmaceutical composition of at least one of the claims 1-4, wherein the FGF-21 compound is selected from FGF-21 or a FGF-21 mimetic.

6. The pharmaceutical composition of claim 5, wherein the FGF-21 mimetic is selected from a protein having at least about 96% amino acid sequence identity to the amino acid sequence shown in SEQ ID NO: 1 and having FGF-21 activity, a FGF-21 fusion protein and/or a FGF-21 conjugate.

7. The pharmaceutical composition of claim 6, wherein the FGF-21 mimetic is selected from a FGF-21 mutein, a FGF-21-Fc fusion protein, a FGF-21-HSA fusion protein and/or a PEGylated FGF-21.

8. The pharmaceutical composition of at least one of the claims 1-7, wherein the GLP-1R agonist is selected from a bioactive GLP-1, a GLP-1 analog or a GLP-1 substitute.

9. The pharmaceutical composition of claim 8, wherein the GLP-1R agonist is selected from GLP-1(7-37), GLP-1(7-36)amide, extendin-4, liraglutide, CJC-1131, albugon, albiglutide, exenatide, exenatide-LAR, oxyntomodulin, lixisenatide, geniproside,

AVE-0010 (SEQ ID NO: *9*), a short peptide with GLP-1R agonistic activity and/or a small organic compound with GLP-1R agonistic activity.

10. The pharmaceutical composition of at least one of the claims 1-9, wherein the anti-diabetic drug is selected from metformin, a thiazolidinedione, a sulphonylurea, and/or insulin.

11. The pharmaceutical composition of at least one of the claims 1-10, wherein the DPP-4 inhibitor is selected from sitagliptin, vildagliptin, saxagliptin, linagliptin, adogliptin and/or berberine.

12. The pharmaceutical composition of at least one of the claims 1-11 for use in treating at least one metabolic syndrome and/or atherosclerosis.

13. The pharmaceutical composition of claim 12, wherein the metabolic syndrome is selected from diabetes, dyslipidemia, obesity and/or adipositas, in particular Type 2-diabetes.

14. Use of a pharmaceutical composition as defined in at least one of the claims 1-11 for the preparation of a medicament for treating at least one metabolic syndrome and/or atherosclerosis in a patient.

15. The use of claim 14, wherein the metabolic syndrome is selected from diabetes, dyslipidemia, obesity and/or adipositas, in particular Type 2-diabetes.

16. The use of claim 14 or 15, wherein the patient is selected from a Type 1-diabetic patient, a Type 2-diabetic patient, in particular a diet-treated Type 2-diabetic patient, a sulfonylurea-treated Type 2-diabetic patient, a far-advanced stage Type 2-diabetic patient and/or a long-term insulin-treated Type 2-diabetic patient.

Claims

1. A pharmaceutical composition containing at least one FGF-21 (fibroblast growth factor 21) compound according to SEQ ID NO: 2 and at least one GLP-1R (glucagon-like peptide-1 receptor) agonist.

2. The pharmaceutical composition of claim 1, wherein the composition further contains at least one anti-diabetic drug and/or at least one DPP-4 (dipeptidyl peptidase-4) inhibitor.

3. The pharmaceutical composition of claim 1 or 2, wherein the FGF-21 compound according to SEQ ID NO: 2, the GLP-1R agonist(s), optionally the anti-diabetic drug(s) and optionally the DPP-4 inhibitor are combined in one formulation or contained in several formulations.

4. The pharmaceutical composition of claim 3, wherein the formulations of the FGF-21 compound according to SEQ ID NO: 2, the GLP-1R agonist(s), optionally the anti-diabetic drug(s) and optionally the DPP-4 inhibitor are suitable for simultaneous or subsequent administration(s).

5. The pharmaceutical composition of at least one of the claims 1-4, wherein the GLP-1R agonist is selected from a bioactive GLP-1, a GLP-1 analog or a GLP-1 substitute.

6. The pharmaceutical composition of claim 5, wherein the GLP-1R agonist is selected from GLP-1(7-37), GLP-1(7-36)amide, extendin-4, liraglutide, CJC-1131, albugon, albiglutide, exenatide, exenatide-LAR, oxyntomodulin, lixisenatide, geniproside, *AVE-0010* (SEQ ID NO: *9*), a short peptide with GLP-1R agonistic activity and/or a small organic compound with GLP-1R agonistic activity.

7. The pharmaceutical composition of at least one of the claims 2-6, wherein the anti-diabetic drug is selected from metformin, a thiazolidinedione, a sulphonylurea, and/or insulin.

8. The pharmaceutical composition of at least one of the claims 2-7, wherein the DPP-4 inhibitor is selected from sitagliptin, vildagliptin, saxagliptin, linagliptin, adogliptin and/or berberine.

9. The pharmaceutical composition of at least one of the claims 1-8 for use in treating at least one metabolic syndrome and/or atherosclerosis.

10. The pharmaceutical composition of claim 9, wherein the metabolic syndrome is selected from diabetes, dyslipidemia, obesity and/or adipositas, in particular Type 2-diabetes.

11. Use of a pharmaceutical composition as defined in at least one of the claims 1-10 for the preparation of a medicament for treating at least one metabolic syndrome and/or atherosclerosis in a patient.

12. The use of claim 11, wherein the metabolic syndrome is selected from diabetes, dyslipidemia, obesity and/or adipositas, in particular Type 2-diabetes.

13. The use of claim 11 or 12, wherein the patient is selected from a Type 1-diabetic patient, a Type 2-diabetic patient, in particular a diet-treated Type 2-diabetic patient, a sulfonylurea-treated Type 2-diabetic patient, a far-advanced stage Type 2-diabetic patient and/or a long-term insulin-treated Type 2-diabetic patient.