Claims

1. Use of an agonist of Tacr2 or a pharmaceutically acceptable salt thereof in the manufacture of a medicament for treatment of insulin resistance, diabetes and/or obesity and/or for inducing weight loss in an individual in need thereof, wherein the agonist comprises or consists of a peptide.

2. The use according to claim 1, wherein said peptide is linked to a conjugated moiety.

3. The use according to claim 1 or claim 2, wherein the agonist or the peptide comprises or consists of a peptide of sequence $X_6X_1FX_2X_3X_4X_5$ and wherein
   X_6= aspartic acid (D) or glutamic acid (E);
   X_1= serine (S) or lysine (K);
   X_2= valine (V) or tryptophan (W);
   X_3= glycine (G) or β – alanine (β – ala);
   X_4=methyl-leucine (Me-Leu), L, or γ – lactam-leucine (γ – lactam-Leu);
   X_5=norleucine (Nle) or methionine (M).

4. The use according to any one of the preceding claims, wherein the agonist or the peptide comprises or consists of a peptide of sequence $DX_1FX_2X_3X_4X_5$ and wherein
   X_1= serine (S) or lysine (K);
   X_2= valine (V) or tryptophan (W);
   X_3= glycine (G) or β – alanine (β – ala);
   X_4=methyl-leucine (Me-Leu), L, or γ – lactam-leucine (γ – lactam-Leu);
   X_5=norleucine (Nle) or methionine (M).

5. The use according to any one of the preceding claims, wherein the agonist or the peptide comprises or consists of Neurokinin A or a functional analogue thereof.

6. The use according to any one of claims 2 to 5, wherein the peptide consists of at least 7 and at most 130 amino acid residues.

7. The use according to any one of claims 2 to 5, wherein the peptide consists of at least 10 and at most 130 amino acid residues.

8. The use according to any one of claims 2 to 7, wherein the peptide comprises a precursor protein of Neurokinin A of SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14 or SEQ ID NO:15 or a functional analogue thereof sharing at least 75% sequence identity.

9. The use according to any one of claims 2 to 8, wherein the peptide comprises a fragment of the precursor protein of Neurokinin A of SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14 or SEQ ID NO:15 or a functional analogue thereof sharing at least 75% sequence identity.

10. The use according to any one of claims 2 to 9, wherein the peptide consists of a consecutive sequence of SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14 or SEQ ID NO:15 or a functional analogue thereof sharing at least 75% sequence identity.

11. The use according to any one of claims 2 to 10, wherein the peptide comprises a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27 and wherein at the most 2 amino acids have been exchanged.

12. The use according to any one of claims 2 to 11, wherein the peptide consists of a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27 and wherein at the most 2 amino acids have been exchanged.

13. The use according to any one of claims 2 to 12, wherein said peptide contains a C-terminal amidation or an N-terminal acetylation.

14. The use according to any one of the preceding claims, wherein the conjugated moiety is selected from a group consisting of peptides, lipids, glycans, saccharides and PEG.

15. The use according to any one of the preceding claims, wherein the conjugated moiety is a mannose and wherein said mannose is conjugated to the N-terminal amino acid of the peptide.

16. The use according to any one of the preceding claims, wherein the conjugated moiety is a fatty acid selected from the group consisting of Capric acid, Lauric acid, Myristic acid, Palmitic acid, Stearic acid, and Arachidic acid.

17. The use according to any one of the preceding claims, wherein the conjugated moiety is a fatty acid linked to an amino acid, selected from the group consisting of –Naa-Capric acid, –Naa-Lauric acid, –Naa-Myristic acid, –Naa-Palmitic acid, –Naa-Stearic acid, and –Naa-Arachidic acid, wherein –Naa- is any proteinogenic amino acid.

18. The use according to any one of the preceding claims, wherein the agonist has higher affinity to Tacr2 than to Tacr1, and/or wherein said agonist reduces the blood glucose C_{min} of said individual in need thereof and/or wherein said agonist increases the time interval between reaching the blood glucose C_{min} in response to insulin and returning to pre-insulin glucose levels in said individual in need thereof.

19. The use according to any one of the preceding claims, wherein the diabetes is any one of type 1 diabetes, type 2 diabetes and gestational diabetes.