CLAIMS

1. A taste masked multi-layered particle comprising a pharmaceutically active ingredient, comprising:

a) an inert core,

b) one or more coating layer(s) comprising the pharmaceutically active ingredient and a binder,

c) an intermediate coating layer (seal coating) free from a low molecular weight water-soluble ionic compound, comprising a water-soluble pharmaceutical film-forming compound, selected from

(i) hydroxypropyl methylcellulose (HPMC) and polyethylene glycol (PEG) or

(ii) poly(1-vinylpyrrolidin-2-one) (PVP),

and

d) an outer coating layer (final or taste masking coating) free from a low molecular weight water-soluble ionic compound, comprising

(i) a poly(meth)acrylate or

(ii) a mixture comprising 60-90% (w/w) ethylcellulose (EC) and 10-40% (w/w) hydroxypropyl methylcellulose (HPMC),

wherein the pharmaceutically active ingredient is water-soluble and comprises either at least one basic group and/or a bitter taste.

~~2. A taste masked multi-layered particle according to claim 1, wherein the pharmaceutically active ingredient is selected from:~~

~~α) a DPP-IV inhibitor,~~

~~β) an i_f-channel blocker,~~

~~γ) a phosphodiesterase III inhibitor,~~

~~δ) a cyclooxygenase-2 inhibitor and/or~~

~~ε) a benzodiazepine-receptor agonist.~~

32. A taste masked multi-layered particle according to claim 1 ~~or 2~~, further comprising one or more additional layers between the inert core and/or between one of the coating layers (b) to (d) and/or on top of coating layer (d).

~~4. A taste masked multi-layered particle according to one or more of claims 1 to 3, and/or~~ wherein ~~preferably~~ the material for the inert core is cellulose, ~~more~~ preferably microcrystalline cellulose.

~~53~~. A taste masked multi-layered particle according to one or more of claims 1 to ~~42~~, wherein the binder for coating layer (b) comprising the pharmaceutically active ingredient is selected from HPMC and PVP or a mixture thereof and optionally additional ingredients, preferably the HPMC Hypromellose, USP Substitution Type 2910 (apparent viscosity 4.8 - 7.2 mPas) and/or PVP K30 and optionally additional ingredients, ~~and/or~~

~~6. A taste masked multi-layered particle according to one or more of claims 1 to 5,~~ wherein coating layer (b) comprises 80 to 95% (w/w), preferably 82.5 to 90% (w/w), more preferred 84.5 to 87.5% (w/w) of the pharmaceutically active ingredient, and 5 to 20% (w/w), preferably 10 to 17.5% (w/w), more preferred 12.5 to 15.5% (w/w) of the binder, ~~or~~

~~7. A taste masked multi-layered particle according to one or more of claims 1 to 5,~~ wherein coating layer (b) comprises 60 to 70% (w/w) of the pharmaceutically active ingredient, 25 to 35% (w/w) of HPMC as binder and 0.5-3% (w/w) magnesium stearate.

~~84~~. A taste masked multi-layered particle according to one or more of claims 1 to ~~73~~, wherein the intermediate coating layer (seal coating) (c) additionally comprises talc, preferably 10 to 30% (w/w) talc, more preferred 15 to 25% (w/w)% talc, most preferred 21-23% (w/w) talc, ~~and/or~~

~~9. A taste masked multi-layered particle according to one or more of claims 1 to 8,~~ wherein the material for the intermediate coating layer (seal coating) (c), (i), HPMC and PEG, is selected from the HPMC Hypromellose, USP Substitution Type 2910 (apparent viscosity 2.4 – 3.6 mPas) and/or PEG 6000, ~~and/or~~

~~10. A taste masked multi-layered particle according to claim one or more of claims 1 to 9,~~ wherein the material for the intermediate coating layer (seal coating) (c),

(i) comprises 65 to 75% (w/w) HPMC, 7.5 to 12.5% (w/w) PEG 6000 and 19 to 23% (w/w) talc, or

~~11. A taste masked multi-layered particle according to one or more of claims 1 to 8,~~ wherein the material for the intermediate coating layer (seal coating) (c), (ii) PVP, is selected from PVP K 30 and/or

~~12. A taste masked multi-layered particle according to one or more of claims 1 to 8 and 11,~~ wherein the material for the intermediate coating layer (seal coating) (c), (ii), comprises 70-80% (w/w) PVP and 20-25% (w/w) talc.

~~13~~5. A taste masked multi-layered particle according to one or more of claims 1 to ~~12~~4, wherein the material for the outer coating layer (final or taste masking coating) (d) (i), poly(meth)acrylate, is a basic butylated methacrylate copolymer, and/or

~~14. A taste masked multi-layered particle according to one or more of claims 1 to claim 13,~~ wherein the material for the outer coating layer (final or taste masking coating) (d) (i), comprises 50-80% (w/w) poly(meth)acrylate, 0-8% (w/w) sodium lauryl sulfate, 0-35% (w/w) stearic acid and/or 0-35% (w/w) magnesium stearate, and/or

~~15. A taste masked multi-layered particle according to claim 14,~~ wherein the material for the outer coating layer (final or taste masking coating) (d) (i), comprises poly(meth)acrylate and stearic acid in a weight ratio of 80:20 to 60:40, more preferred 75:25 to 65:35, most preferred 70:30, and/or

~~16. A taste masked multi-layered particle according to one or more of claims 1 to 15,~~ wherein the material for the outer coating layer (final or taste masking coating) (d) (i) makes up a coating level of at least 50% (w/w) (based on the weight of the particles beneath this coating), preferably 100 to 300% (w/w), more preferred 150 to 250% (w/w), even more preferred 180 to 220% (w/w), most preferred 190 to 210% (w/w), or

~~17. A taste masked multi-layered particle according to one or more of claims 1 to 12,~~ wherein the material for the outer coating layer (final or taste masking coating) (d) (ii), is selected from EC with a viscosity range of 41-49 mPas (measured as 5% solution in a mixture of 80% toluene and 20% ethanol and an ethoxyl content of 48.0 - 49.5%) and/or HPMC with a methoxyl content of 28-30%, a hydroxypropylcontent of 7-12% and a viscosity range of 4-6 mPas (measured as 2% solution in water), and/or ~~;~~

~~18. A taste masked multi-layered particle according to one or more of claims 1 to 12 or claim 17,~~ wherein the material for the outer coating layer (final or taste masking coating) (d) (ii), comprises 50-75% (w/w) EC, 15-40% (w/w) HPMC and 0-25% (w/w) magnesium stearate, preferably 50-60% (w/w) EC, 20-25% (w/w) HPMC and 17.5-22.5% (w/w) magnesium stearate, and/or ~~;~~

~~19. A taste masked multi-layered particle according to one or more of claims 1 to 12, 17 and/or 18,~~ wherein the material for the outer coating layer (final or taste masking coating) (d) (ii) makes up a coating level of at least 25% (w/w) (based on the weight of the particles beneath this coating), preferably 25 to 100% (w/w), more preferred 50 to 90% (w/w), even more preferred 70 to 80% (w/w), most preferred 72.5 to 77.5% (w/w).

~~20~~6. A taste masked multi-layered particle according to one or more of claims 1 to ~~19~~5, wherein the outer coating layer (final or taste masking coating) (d) of the particle is characterized
in mode (i) (poly(meth)acrylate) by a thickness of 50 to 150 µm, preferably 60 to 140 µm, more preferred 70 to 130 µm, even more preferred 75 to 125 µm, most preferred 77 to 119 µm, or
in mode (ii) (mixture comprising EC and HPMC) by a thickness of 10 to 150 µm, preferably 12 to 120 µm, more preferred 15 to 100 µm, most preferred 20 to 50 µm.

~~21~~7. A taste masked multi-layered particle according to one or more of claims ~~3~~2 to ~~20~~6, wherein the one or more additional layers between the inert core and/or between one of the coating layers (b) to (d) and/or on top of coating layer (d)

comprise(s) colloidal siliciumdioxide, preferably 0.1-5% (w/w) (based on the weight of the final particles), more preferred 0.2-2.5% (w/w), most preferred 0.2-1% (w/w), and/or

~~22. A taste masked multi-layered particle according to one or more of claims 3 to 21,~~ wherein an additional coating layer(s) is a final outer-coating on top of coating layer (final or taste masking coating) (d) and the material for this additional coating layer(s) is selected from HPMC with a methoxyl content of 28-30%, a hydroxypropylcontent of 7-12% and a viscosity range of 4-6 mPas (measured as 2% solution in water).

~~23~~8. A taste masked multi-layered particle according to one or more of claims 1 to ~~22~~7, wherein one or more of the layer material(s) comprise(s) additional substances, preferably filler substances, binders, wetting agents, glidants, lubricants, dispersing agents, coloring agents and/or anti-tacking agents, selected from one or more of: mannitol, starch, talc, titaniumdioxide, sodium lauryl sulfate, sodium dodecylsulfate, stearic acid, magnesium stearate, silica and medium chain triglycerides, and/or

~~24. A taste masked multi-layered particle according to one or more of claims 1 to 22,~~ wherein one or more of the layer material(s), preferably for one of the seal coating and/or final coating comprise(s) additional substances selected from flavoring agents, pigments and substances for the reduction of electrostatic charging, more preferred meat flavor, pigments and/or siliciumdioxide.

~~25~~9. A taste masked multi-layered particle according to one or more of claims 1 to ~~24~~8, wherein the inert core is characterized by a diameter of 50 to 300 µm, preferably 75 to 250 µm, more preferred 100 to 200 µm, and/or

~~26. A taste masked multi-layered particle according to one or more of claims 1 to 25,~~ wherein the final coated particle is characterized by an overall diameter of 80 to 800 µm, preferably 90 to 600 µm, more preferred 100 to 400 µm, and/or

27. A taste masked multi-layered particle according to one or more of claims 1 to 26, wherein the pharmaceutically active ingredient in its incorporated chemical form makes up 1 to 50% (w/w) of the final multi-layered particle, preferably 2 to 25% (w/w), more preferred 3 to 22.5% (w/w) and most preferred 5 to 20% (w/w).

28. A taste masked multi-layered particle according to one or more of claims 2 to 27, wherein the pharmaceutically active ingredient (a) (a DPP-IV inhibitor) is selected from 1-[(3-cyano-pyridin-2-yl)methyl]-3-methyl-7-(2-butyn-1-yl)-8-[3-(R)-amino-piperidin-1-yl]-xanthine or any appropriate form and/or salt thereof, preferably 1-[(3-cyano-pyridin-2-yl)methyl]-3-methyl-7-(2-butyn-1-yl)-8-[3-(R)-amino-piperidin-1-yl]-xanthine monohydrochloride.

29. A taste masked multi-layered particle according to claim 28 comprising 1-[(3-cyano-pyridin-2-yl)methyl]-3-methyl-7-(2-butyn-1-yl)-8-[3-(R)-amino-piperidin-1-yl]-xanthine monohydrochloride as pharmaceutically active ingredient, comprising:

a) an inert core comprising microcrystalline cellulose,

b) two coating layer(s) each of them comprising 60 to 90% (w/w) of the pharmaceutically active ingredient and 10 to 40% (w/w) of HPMC as binder,

c) an intermediate coating layer (seal coating) comprising 65 to 75% (w/w) HPMC, 7.5 to 12.5% (w/w) PEG 6000 and 19 to 23% (w/w) talc and

d) an outer coating layer (final or taste masking coating) comprising 50-80% (w/w) basic butylated methacrylate copolymer, 5-8% (w/w) sodium lauryl sulfate, 8-35% (w/w) stearic acid and 18-26% (w/w) magnesium stearate,

wherein the material for the outer coating layer (d) (final or taste masking coating) makes up a coating level of 190 to 210% (w/w).

30. A taste masked multi-layered particle according to claim 28 or 29, wherein the pharmaceutically active ingredient in its incorporated chemical form makes up 5 to 25% (w/w) of the final multi-layered particle (calculated as free base),

~~preferably 10 to 23% (w/w), more preferred 18 to 22% (w/w), most preferred 20 to 21% (w/w).~~

10. A taste masked multi-layered particle according to one or more of claims 1 to 9, wherein the pharmaceutically active ingredient is selected from one or more of the following compound groups:

a) a DPP IV inhibitor, preferably 1-[(3-cyano-pyridin-2-yl)methyl]-3-methyl-7-(2-butyn-1-yl)-8-[3-(R)-amino-piperidin-1-yl]-xanthine or any appropriate form and/or salt thereof, preferably 1-[(3-cyano-pyridin-2-yl)methyl]-3-methyl-7-(2-butyn-1-yl)-8-[3-(R)-amino-piperidin-1-yl]-xanthine monohydrochloride,

b) an I_f-channel blocker, preferably zatebradine (1-(7,8-dimethoxy-1,3,4,5-tetrahydro-2H-3-benzazepin-2-on-3-yl)-3-[N-methyl-N-[(2-(3,4-dimethoxyphenyl)ethyl]amino]-propane), 3-[(N-(2-(3,4-dimethoxy-phenyl)-ethyl)piperidin-3-yl)-methyl]-(7,8-dimethoxy-1,3,4,5-tetrahydro-2H-3-benzazepin-2-on, its enantiomer cilobradine ((+)-3-[(N-(2-(3,4-dimethoxy-phenyl)ethyl)-piperidin-3-(S)-yl)-methyl]-(7,8-dimethoxy-1,3,4,5-tetrahydro-2H-3-benzazepin-2-on) or alinidine (2-(N-allyl-2,6-dichloro-anilino)-2-imidazoline), mostly preferred cilobradine hydrochloride ((+)-3-[(N-(2-(3,4-dimethoxy-phenyl)ethyl)-piperidin-3-(S)-yl)-methyl]-(7,8-dimethoxy-1,3,4,5-tetrahydro-2H-3-benzazepin-2-on hydrochloride),

b) a phosphodiesterase III inhibitor, preferably pimobendan ((*RS*)-6-[2-(4-methoxyphenyl)-1*H*-benzimidazol-5-yl]-5-methyl-4,5-dihydropyridazin-3(2*H*)-one),

d) a cyclooxygenase 2 inhibitor, preferably meloxicam (4-hydroxy-2-methyl-N-(5-methyl-2-thiazolyl)-2H-1,2-benzothiazine-3-carboxamide-1,1-dioxide), and/or

e) a benzodiazepine receptor agonist, preferably 1-(4-chlorophenyl)-4-piperidinoimidazolin-2-one and imepitoin (1-(4-chlorophenyl)-4-(4-morpholinyl)-2,5-dihydro-1H-imidazol-2-one), more preferably imepitoin.

~~31. A taste masked multi-layered particle according to one or more of claims 2 to~~

~~27, wherein the pharmaceutically active ingredient (β) (an i_f-channel blocker) is selected from zatebradine (1-(7,8-dimethoxy-1,3,4,5-tetrahydro-2H-3-benzazepin-2-on-3-yl)-3-[N-methyl-N-[(2-(3,4-dimethoxyphenyl)ethyl]amino]-propane), 3-[(N-(2-(3,4-dimethoxy-phenyl)-ethyl)piperidin-3-yl)-methyl]-(7,8-dimethoxy-1,3,4,5-tetrahydro-2H-3-benzazepin-2-on, its enantiomer cilobradine ((+)-3-[(N-(2-(3,4-dimethoxy-phenyl)ethyl)-piperidin-3-(S)-yl)-methyl]-(7,8-dimethoxy-1,3,4,5-tetrahydro-2H-3-benzazepin-2-on) or alinidine (2-(N-allyl-2,6-dichloro-anilino)-2-imidazoline), mostly preferred cilobradine hydrochloride ((+)-3-[(N-(2-(3,4-dimethoxy-phenyl)ethyl)-piperidin-3-(S)-yl)-methyl]-(7,8-dimethoxy-1,3,4,5-tetrahydro-2H-3-benzazepin-2-on hydrochloride).~~

~~32~~11. A taste masked multi-layered particle according to claim ~~31~~10, comprising cilobradine hydrochloride as pharmaceutically active ingredient comprising:

a) an inert core comprising microcrystalline cellulose,

b) one coating layer comprising 60 to 70% (w/w) of the pharmaceutically active ingredient, 25 to 35% (w/w) of HPMC as binder and 0.5-3% (w/w) magnesium stearate,

c) an intermediate coating layer (seal coating) comprising 70-80% (w/w) PVP K 30, 20-25% (w/w) talc and 0.5-5% (w/w) siliciumdioxide and

d) an outer coating layer (final or taste masking coating) comprising a mixture comprising 50-60% (w/w) EC, 20-25% (w/w) HPMC, 17.5-22.5% (w/w) magnesium stearate and 0.5-3% (w/w) siliciumdioxide,

wherein the material for the outer coating layer (d) (final or taste masking coating) makes up a coating level of 72.5 to 77.5% (w/w), and/or ~~,~~

~~33. A taste masked multi-layered particle according to claim 31 or 32,~~ wherein the pharmaceutically active ingredient in its incorporated chemical form makes up 2 to 10% (w/w) of the final multi-layered particle (calculated as hydrochloride), preferably, 3 to 7,5% (w/w), more preferred 4 to 6% (w/w), most preferred 5.25

to 5.75% (w/w).

~~34. A taste masked multi-layered particle according to one or more of claims 2 to 27, wherein the pharmaceutically active ingredient (γ) (a phosphodiesterase III inhibitor) is pimobendan ((*RS*)-6-[2-(4-methoxyphenyl)-1*H*-benzimidazol-5-yl]-5-methyl-4,5-dihydropyridazin-3(2*H*)-one).~~

~~35. A taste masked multi-layered particle according to one or more of claims 2 to 27, wherein the pharmaceutically active ingredient (δ) (a cyclooxygenase 2 inhibitor) is meloxicam (4-hydroxy-2-methyl-*N*-(5-methyl-2-thiazolyl)-2*H*-1,2-benzothiazine-3-carboxamide-1,1-dioxide).~~

~~36. A taste masked multi-layered particle according to one or more of claims 2 to 27, wherein the pharmaceutically active ingredient (ε) (a benzodiazepine receptor agonist) is selected from 1-(4-chlorophenyl)-4-piperidinoimidazolin-2-one and imepitoin (1-(4-chlorophenyl)-4-(4-morpholinyl)-2,5-dihydro-1*H*-imidazol-2-one), preferably imepitoin.~~

~~37~~12. Method for the production of a multi-layered particle according to one or more of claims 1 to ~~36~~11, in which the coating layers are assembled stepwise, starting from the material for the inert core, the single coating steps separated by drying steps, and/or .

~~38. Method according to claim 37,~~ which takes place in a fluid bed, preferably a Wurster fluid bed coating process, and/or .

~~39. Method according to claim 37 or 38,~~ wherein the material for the outer coating layer (d) (i) (final or taste masking coating) is added to an amount of at least 50% (w/w) (based on the weight of the particles to be coated in this step), preferably 100 to 300% (w/w), more preferred 150 to 250% (w/w), even more preferred 180 to 220% (w/w), most preferred 190 to 210% (w/w), or .

~~40. Method according to claim 37 or 38,~~ wherein the material for the outer coating layer (d) (ii) (final or taste masking coating) is added to an amount of at least

25% (w/w) (based on the weight of the particles beneath this coating), preferably 25 to 100% (w/w), more preferred 50 to 90% (w/w), even more preferred 70 to 80% (w/w), most preferred 72.5 to 77.5% (w/w).

~~41~~13. Use of

(i) a mixture comprising hydroxypropyl methylcellulose (HPMC) and polyethylene glycol (PEG) or

(ii) poly(1-vinylpyrrolidin-2-one) (PVP),

for the assembly of an intermediate coating layer (seal coating) (c) free from a low molecular weight water-soluble ionic compound of a multi-layered particle as defined in one or more of claims 1 to ~~36~~11, and/or

~~42. Use according to claim 41,~~ wherein the material for the intermediate coating layer (seal coating) (c) (i) comprises 65 to 75% (w/w) HPMC, 7.5 to 12.5% (w/w) PEG 6000 and 19 to 23% (w/w) talc, or

~~43. Use according to claim 41,~~ wherein the material for the intermediate coating layer (seal coating) (c) (ii) comprises 70-80% (w/w) PVP and 20-25% (w/w) talc.

~~44~~14. Use of

(i) poly(meth)acrylate or

(ii) a mixture comprising 60-90% (w/w) EC and 10-40% (w/w) hydroxypropyl methylcellulose (HPMC),

for the assembly of an outer coating layer (final or taste masking coating) (d) free from a low molecular weight water-soluble ionic compound of a multi-layered particle as defined in one or more of claims 1 to ~~36~~11, and/or

~~45. Use according to claim 44,~~ wherein the material for the outer coating layer (final or taste masking coating) (d) comprises additional substances selected from flavoring agents, pigments and substances for the reduction of electrostatic charging, and/or

~~46. Use according to claim 44 or 45,~~ wherein the material for the outer coating layer (d) (i) (final or taste masking coating with poly(meth)acrylate) is added to an amount of at least 50% (w/w) (based on the weight of the particles to be coated in this step), preferably 100 to 300% (w/w), more preferred 150 to 250% (w/w), even more preferred 180 to 220% (w/w), most preferred 190 to 210% (w/w), or

~~47. Use according to claim 44 or 45,~~ wherein the material for the outer coating layer (d) (ii) (final or taste masking coating with a mixture comprising 60-90% (w/w) EC and 10-40% (w/w) HPMC) is added to an amount of at least 25% (w/w) (based on the weight of the particles beneath this coating), preferably 25 to 100% (w/w), more preferred 50 to 90% (w/w), even more preferred 70 to 80% (w/w), most preferred 72.5 to 77.5% (w/w).

~~48~~15. Multi-layered particle according to one or more of claims 1 to ~~36~~11, for use in a method of ~~the~~ treatment of

α) a metabolic disease, via DPP IV as target,

β) a heart disease, via the i_f-channel as target,

γ) a heart disease, via phosphodiesterase III as target,

δ) an inflammatory disease via cyclooxygenase 2 as target and/or

ε) a disease of the central nervous system via the benzodiazepine receptor as target.

~~49. Multi-layered particle according to claim 48~~ preferably for the treatment of an animal, more preferably a mammal, more preferred a predominantly carnivorous mammal, most preferred a dog (canis) or a cat (feline).

~~50~~16. Pharmaceutical composition comprising a multi-layered particle according to one or more of claims 1 to ~~36~~11, for ~~the~~ use in a method ~~for the~~of treatment of

α) a metabolic disease, via DPP IV as target,

β) a heart disease, via the i_f-channel as target,

γ) a heart disease, via phosphodiesterase III as target,

δ) an inflammatory disease via cyclooxygenase 2 as target and/or

ε) a disease of the central nervous system via the benzodiazepine receptor as target.

~~51. Pharmaceutical composition according to claim 50~~ preferably for ~~the use for~~ the treatment of an animal, more preferably a mammal, more preferred a predominantly carnivorous mammal, most preferred a dog (canis) or a cat (feline).

~~52~~17. Pharmaceutical composition according to claim ~~50 or 51~~16 in solid form or ~~, preferably a capsule or tablet with a mass of 20 to 4000 mg per unit, more preferred 20 to 500 mg per unit, even more preferred 30 to 400 mg per unit, most preferred 40 to 300 mg per unit.~~

~~53. Solid pharmaceutical composition according to claim 52, comprising the pharmaceutically active ingredient in a final concentration of 0.1 to 1000 mg per unit, preferred 2 to 50 mg per unit, even more preferred 3 to 40 mg per unit, most preferred 4 to 30 mg per unit.~~

~~54. Solid pharmaceutical composition according to claim 52 or 53 in the form of a tablet, preferably a tablet with one or more score lines to be split into pieces.~~

~~55. Pharmaceutical composition according to claim 50 or 51~~ in overall liquid form, preferably as~~.~~

~~56. Overall liquid pharmaceutical composition according to claim 55 which is~~ an oily suspension, more preferred an oily suspension comprising a viscosity enhancer selected from one or more of silicon dioxide, hydrophobic silicon dioxide, EC (cellulose ether), poly(1-vinylpyrrolidin-2-one) (PVP), aluminium stearate, xanthan gum, carrageen, and/or starch derivatives, more preferably ~~.~~

~~57. Overall liquid, oily pharmaceutical composition according to claim 56~~ comprising a mixture of hydrophilic and hydrophobic colloidal siliciumdioxide, preferably at a weight percent ratio of 0.5:1 to 50:1, more preferred 1:1 to 25:1, more preferred 2:1 to 10:1, most preferred 2.25:1 to 5:1, or as~~.~~

~~58. Overall liquid pharmaceutical composition according to claim 55 which is~~ an aqueous suspension, more preferred an aqueous suspension comprising stabilisers selected from one or more of cellulose ethers, carbopol, xanthan gum, carrageen, microcrystalline cellulose, preferably ~~.~~

59. Overall liquid pharmaceutical composition according to one or more of claims 55 to 58, comprising the pharmaceutically active ingredient in a final concentration of 0.1 to 20 mg/ml, preferred 0.5 to 5 mg/ml, more preferred 0.75 to 4 mg/ml, most preferred 0.5 to 3 mg/ml.

60. Pharmaceutical composition according to one or more of claims 50 to 59, wherein the pharmaceutically active ingredient (α) (a DPP-IV inhibitor) for the use for the treatment of a metabolic disease is selected from1-[(3-cyano-pyridin-2-yl)methyl]-3-methyl-7-(2-butyn-1-yl)-8-[3-(R)-amino-piperidin-1-yl]-xanthine or any appropriate form and/or salt thereof, preferably 1-[(3-cyano-pyridin-2-yl)methyl]-3-methyl-7-(2-butyn-1-yl)-8-[3-(R)-amino-piperidin-1-yl]-xanthine monohydrochloride.

61. Pharmaceutical composition according to claim 60 for the use for the treatment of an animal, preferably a mammal, more preferred a predominantly carnivorous mammal, most preferred a cat (feline).

62. Pharmaceutical composition according to claim 60 or 61 for the use for the treatment of diabetes, preferably of diabetes type 2.

63. Pharmaceutical composition according to one or more of claims 60 to 62 in solid form, comprising 2 to 50 mg per unit, more preferred 3 to 40 mg per unit, even more preferred 4 to 30 mg per unit.

6418. Pharmaceutical composition according to one or more of claims 50-16 to 5917, wherein the pharmaceutically active ingredient (β) (an i_f-channel blocker) for the use in a method for the treatment of a heart disease, especially heart failure via the i_f-channel as target is selected from zatebradine (1-(7,8-dimethoxy-1,3,4,5-tetrahydro-2H-3-benzazepin-2-on-3-yl)-3-[N-methyl-N-[(2-(3,4-dimethoxyphenyl)ethyl]amino]-propane), 3-[(N-(2-(3,4-dimethoxy-phenyl)-ethyl)piperidin-3-yl)-methyl]-(7,8-dimethoxy-1,3,4,5-tetrahydro-2H-3-benzazepin-2-on, its enantiomer cilobradine ((+)-3-[(N-(2-(3,4-dimethoxy-phenyl)ethyl)-piperidin-3-(S)-yl)-methyl]-(7,8-dimethoxy-1,3,4,5-tetrahydro-2H-

3-benzazepin-2-on) or alinidine (2-(N-allyl-2,6-dichloro-anilino)-2-imidazoline), mostly preferred cilobradine hydrochloride ((+)-3-[(N-(2-(3,4-dimethoxy-phenyl)ethyl)-piperidin-3-(S)-yl)-methyl]-(7,8-dimethoxy-1,3,4,5-tetrahydro-2H-3-benzazepin-2-on hydrochloride),

~~65. Pharmaceutical composition according to claim 64~~ preferably for the use for the treatment of an animal, preferably a mammal, more preferred a predominantly carnivorous mammal, most preferred a cat (feline),

~~66.~~ preferably the p~~P~~harmaceutical composition ~~according to claims 64 or 65~~ in overall liquid form, comprising the pharmaceutically active ingredient in a final concentration of 0.5 to 5 mg/ml, preferred 0.75 to 4 mg/ml, more preferred 0.5 to 3 mg/ml.

~~67. Pharmaceutical composition according to one or more of claims 50 to 59, wherein the pharmaceutically active ingredient (γ) (a phosphodiesterase III inhibitor) for the use for the treatment of a heart disease via phosphodiesterase III as target, is pimobendan ((*RS*)-6-[2-(4-methoxyphenyl)-1*H*-benzimidazol-5-yl]-5-methyl-4,5-dihydropyridazin-3(2*H*)-one).~~

~~68. Pharmaceutical composition according to claim 67 for the use for the treatment of an animal, preferably a mammal, more preferred a predominantly carnivorous mammal, most preferred a dog (canis) or a cat (feline).~~

~~69. Pharmaceutical composition according to one or more of claims 50 to 59, wherein the pharmaceutically active ingredient (δ) (a cyclooxygenase-2 inhibitor) for the use for the treatment of an inflammatory disease via cyclooxygenase-2 as target, is meloxicam (4-hydroxy-2-methyl-N-(5-methyl-2-thiazolyl)-2H-1,2-benzothiazine-3-carboxamide-1,1-dioxide).~~

~~70. Pharmaceutical composition according to claim 69 for the use for the treatment of an animal, preferably a mammal, more preferred a predominantly carnivorous mammal, most preferred a dog (canis) or a cat (feline).~~

~~71. Pharmaceutical composition according to one or more of claims 50 to 59, wherein the pharmaceutically active ingredient (ε) (a benzodiazepine receptor agonist) for the use for the treatment of a disease of the central nervous system via the benzodiazepine receptor as target, is selected from 1-(4-chlorophenyl)-4-piperidinoimidazolin-2-one and imepitoin (1-(4-chlorophenyl)-4-(4-morpholinyl)-2,5-dihydro-1H-imidazol-2-one), preferably imepitoin.~~

~~72. Pharmaceutical composition according to claim 71 for the use for the treatment of an animal, preferably a mammal, more preferred a predominantly carnivorous mammal, most preferred a dog (canis).~~

~~73. Pharmaceutical composition according to claim 71 or 72 for the use for the treatment of epilepsy and/or anxiety, preferably of epilepsy, more preferred of idiopathic epilepsy.~~

~~74~~19. Package of an overall liquid, oily pharmaceutical composition according to claim ~~56~~ 17 or 18~~57~~ comprising a glass vial and the pharmaceutical composition filled therein.