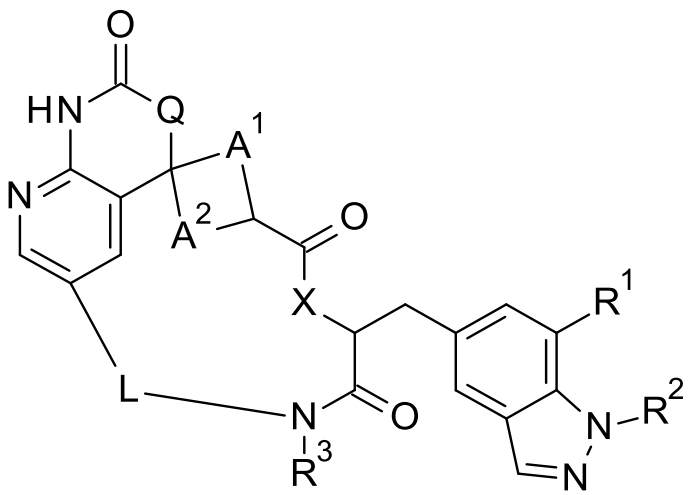
Claims

1. A compound of Formula (1):



(1)

or a salt thereof, wherein;

A^1, A^2 and the atoms to which they are attached together represent an optionally substituted bicyclic or monocyclic ring system;

Q is a bond or O;

X is O or NH;

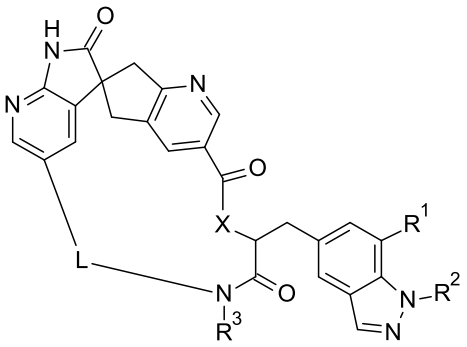
R^1 is H, C_{1-3} alkyl or halo;

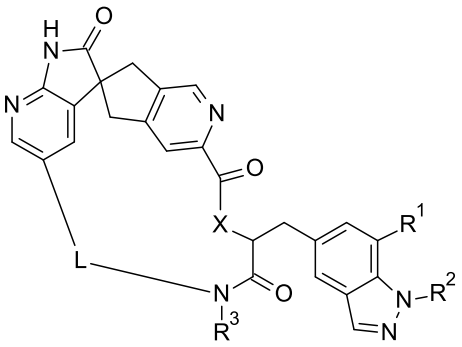
R^2 is H or C_{1-3} alkyl;

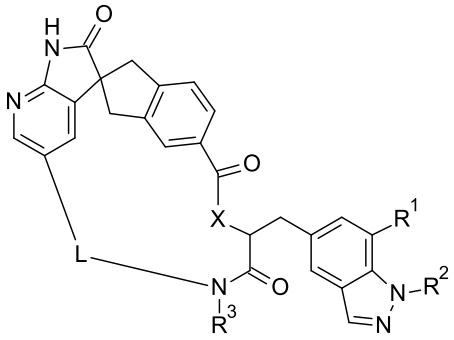
R^3 is H or C_{1-3} alkyl;

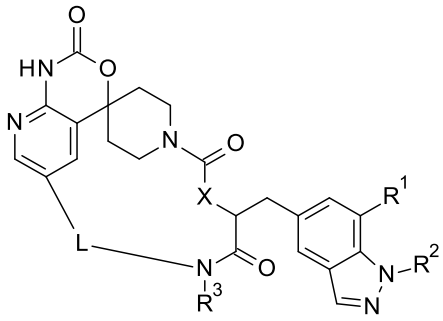
and L is a C_{7-15} linker group, wherein one, two or three, but not all, of the carbon atoms of the linker group may be optionally replaced by a heteroatom selected from O and N.

2. The compound according to claim 1, which is a compound of Formula (2a), (2b), (2c) or (2d):


(2a);

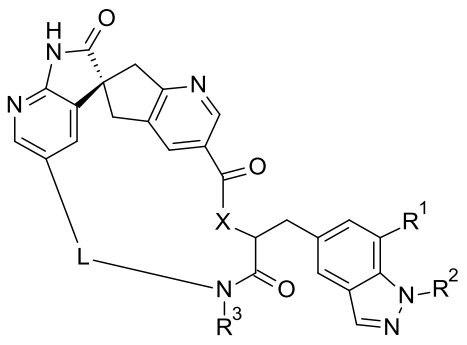

(2b);

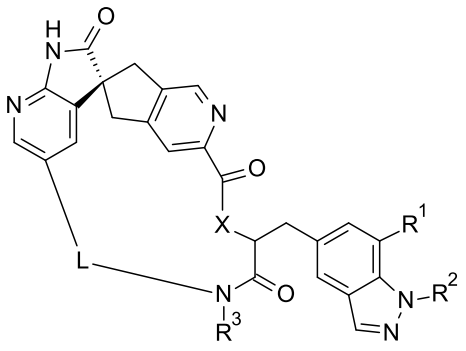

(2c);

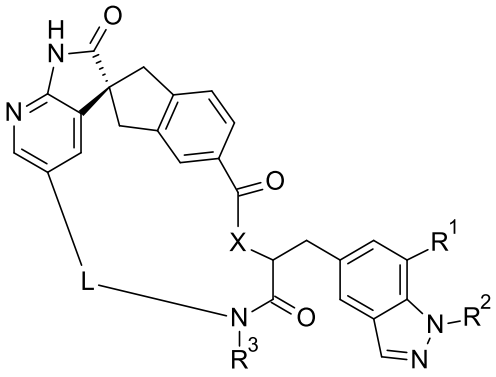

(2d);

or a salt thereof.

3. The compound according to claim 1, which is a compound of Formula (3a), (3b), or (3c);

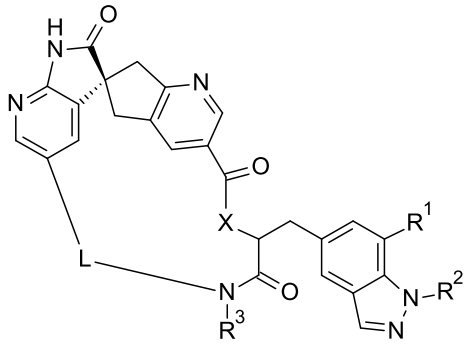

(3a);


(3b);

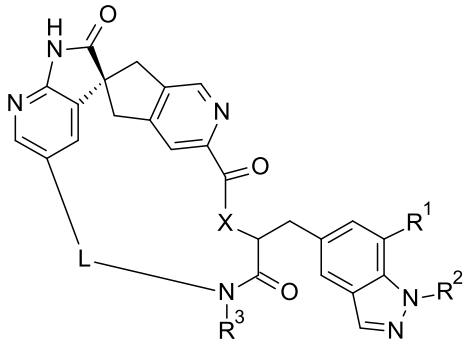

(3c);

or a salt thereof.

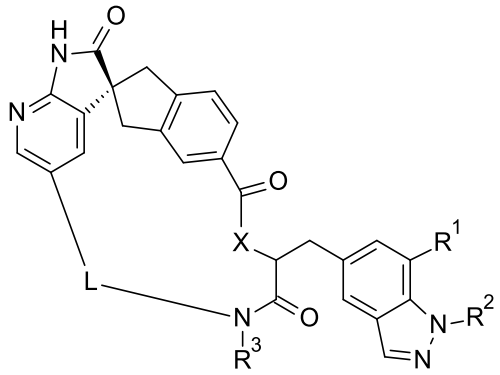
4. The compound according to claim 1, which is a compound of Formula (4a), (4b), or (4c);



(4a);



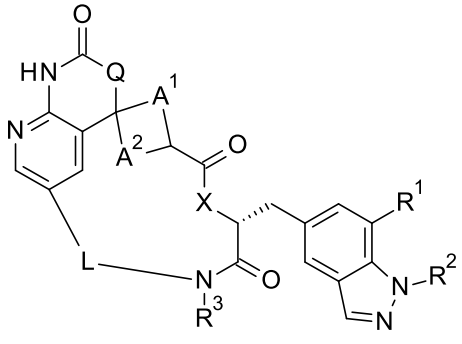
(4b);



(4c);

or a salt thereof.

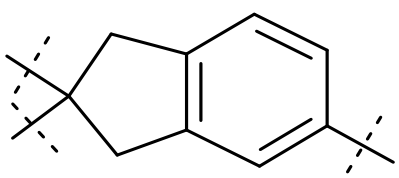
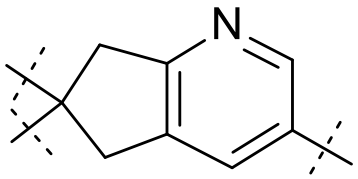
5. The compound according to claim 1, which is a compound of Formula (5):

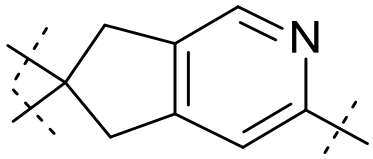


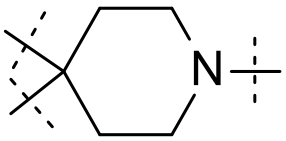
(5)

or a salt thereof.

6. The compound, or a salt thereof, according to claim 1, wherein A^1, A^2 and the atoms to which they are attached together represent a ring system selected from the group consisting of:


;


;


;


.

7. The compound, or a salt thereof, according to claim 1 or claim 6, wherein Q is a bond.

8. The compound, or a salt thereof, according to claim 1 or claim 6, wherein Q is O.

9. The compound, or a salt thereof, according to any one of claims 1 to 8, wherein X is NH.

10. The compound, or a salt thereof, according to any one of claims 1 to 8, wherein X is O.

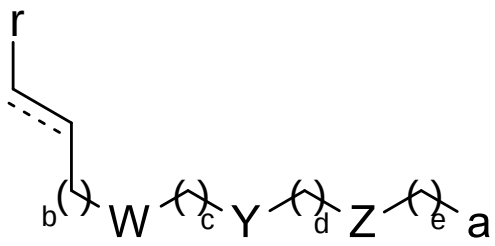
11. The compound, or a salt thereof, according to any one of claims 1 to 8, wherein R^1 is methyl.

12. The compound, or a salt thereof, according to any one of claims 1 to 11, wherein R^2 is H or methyl.

13. The compound, or a salt thereof, according to claim 12, wherein R^2 is H.

14. The compound, or a salt thereof, according to any one of claims 1 to 13, wherein R^3 is methyl.

15. The compound, or a salt thereof, according to any one of claims 1 to 14, wherein L is a linker group of the formula:



wherein “r” indicates the point of attachment to the ring and “a” indicates the point of attachment to the amide group; W, Y and Z are independently selected from a bond, O, CH_2, NH and NMe; b, c, d and e are independently 1, 2 or 3 and the dotted line indicates that the bond may be a single or double bond.

16. The compound, or a salt thereof, according to claim 15, wherein L is selected from the group consisting of:

-CHCHCH$_2$OCH$_2$CH$_2$OCH$_2$CH$_2$-;

-CHCHCH$_2$OCH$_2$CH$_2$OCH$_2$CH$_2$OCH$_2$CH$_2$-;

-CH$_2$CH$_2$CH$_2$OCH$_2$CH$_2$OCH$_2$CH$_2$-;

-CHCHCH$_2$CH$_2$CH$_2$CH$_2$CH$_2$CH$_2$CH$_2$-;

-CHCHCH$_2$OCH$_2$CH$_2$CH$_2$CH$_2$CH$_2$-;

-CHCHCH$_2$OCH$_2$CH$_2$CH$_2$CH$_2$-;

-CHCHCH$_2$OCH$_2$CH$_2$CH$_2$-;

-CHCHCH$_2$OCH$_2$CH$_2$N(CH$_3$)CH$_2$CH$_2$-;

-CHCHCH$_2$OCH$_2$CH$_2$NHCH$_2$CH$_2$-;

-CHCHCH$_2$N(CH$_3$)CH$_2$CH$_2$CH$_2$CH$_2$CH$_2$-;

-CH$_2$CH$_2$CH$_2$OCH$_2$CH$_2$OCH$_2$CH$_2$OCH$_2$CH$_2$-;

-CH$_2$CH$_2$CH$_2$OCH$_2$CH$_2$CH$_2$CH$_2$CH$_2$-;

-CH$_2$CH$_2$CH$_2$OCH$_2$CH$_2$OCH$_2$CH$_2$CH$_2$-;

and

-CHCHCH$_2$OCH$_2$CH$_2$OCH$_2$CH$_2$CH$_2$-.

17. The compound, or a salt thereof, according to claim 16, wherein L is:

-CHCHCH$_2$OCH$_2$CH$_2$OCH$_2$CH$_2$-

or

$CHCHCH_2OCH_2CH_2CH_2CH_2CH_2$-.

18. The compound according to claim 1 which is selected from the group consisting of:

(1S,10R,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-15,18-dioxa-5,9,12,24,26-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1R,10R,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-15,18-dioxa-5,9,12,24,26-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1S,10S,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-15,18-dioxa-5,9,12,24,26-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1S,10R,23E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-15,18,21-trioxa-5,9,12,27,29-pentazapentacyclo[23.5.2.11,4.13,7.028,31]tetratriaconta-3,5,7(33),23,25(32),26,28(31)-heptaene-8,11,30-trione;

(1S,10R,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-5,9,12,24,26-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1S,10R,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-18-oxa-5,9,12,24,26-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1S,10R,19E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-17-oxa-5,9,12,23,25-pentazapentacyclo[19.5.2.11,4.13,7.024,27]triaconta-3,5,7(29),19,21(28),22,24(27)-heptaene-8,11,26-trione;

(1S,10R)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-15,18-dioxa-5,9,12,24,26-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),22(29),23,25(28)-hexaene-8,11,27-trione;

(1S,10R,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-15,18-dioxa-6,9,12,24,26-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1R,10R,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-15,18-dioxa-6,9,12,24,26-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1R,10R,20E)-12,18-dimethyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-6,9,12,18,24,26-hexazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1S,10R,20E)-10-[(1,7-dimethylindazol-5-yl)methyl]-12-methyl-15,18-dioxa-6,9,12,24,26-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1R,10R,20E)-10-[(1,7-dimethylindazol-5-yl)methyl]-12-methyl-15,18-dioxa-6,9,12,24,26-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1R,10R,20E)-10-[(1,7-dimethylindazol-5-yl)methyl]-12-methyl-18-oxa-6,9,12,24,26-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1R,10R,19E)-10-[(1,7-dimethylindazol-5-yl)methyl]-12-methyl-17-oxa-6,9,12,23,25-pentazapentacyclo[19.5.2.11,4.13,7.024,27]triaconta-3,5,7(29),19,21(28),22,24(27)-heptaene-8,11,26-trione;

(1R,10R,20E)-10-[(1,7-dimethylindazol-5-yl)methyl]-12,18-dimethyl-6,9,12,18,24,26-hexazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1R,10R,20E)-10-[(1,7-dimethylindazol-5-yl)methyl]-12,15-dimethyl-18-oxa-6,9,12,15,24,26-hexazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1R,10R,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-15,18-dioxa-9,12,24,26-tetrazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1S,10R,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-15,18-dioxa-9,12,24,26-tetrazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1S,10R,18E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-16-oxa-9,12,22,24-tetrazapentacyclo[18.5.2.11,4.13,7.023,26]nonacosa-3,5,7(28),18,20(27),21,23(26)-heptaene-8,11,25-trione;

(1S,10R,19E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-17-oxa-9,12,23,25-tetrazapentacyclo[19.5.2.11,4.13,7.024,27]triaconta-3,5,7(29),19,21(28),22,24(27)-heptaene-8,11,26-trione;

(1S,10R,20E)-12,15-dimethyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-18-oxa-9,12,15,24,26-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1S,10R,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-18-oxa-9,12,15,24,26-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1R,10R,20E)-10-[(1,7-dimethylindazol-5-yl)methyl]-12-methyl-15,18-dioxa-9,12,24,26-tetrazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1S,10R,20E)-10-[(1,7-dimethylindazol-5-yl)methyl]-12-methyl-15,18-dioxa-9,12,24,26-tetrazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1R,20E)-10-[(7-chloro-1H-indazol-5-yl)methyl]-12-methyl-15,18-dioxa-9,12,24,26-tetrazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1R,10R)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-15,18-dioxa-9,12,24,26-tetrazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),22(29),23,25(28)-hexaene-8,11,27-trione;

(1S,10R)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-15,18-dioxa-9,12,24,26-tetrazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),22(29),23,25(28)-hexaene-8,11,27-trione;

(1S,10R,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-9,15,18-trioxa-5,12,24,26-tetrazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1S,10S,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-9,15,18-trioxa-5,12,24,26-tetrazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1S,10R,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-9,15,18-trioxa-12,24,26-triazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(1R,10R,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-9,15,18-trioxa-12,24,26-triazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22(29),23,25(28)-heptaene-8,11,27-trione;

(7R,17E)-9-methyl-7-[(7-methyl-1H-indazol-5-yl)methyl]-12,15,25-trioxa-4,6,9,21,23-pentazatetracyclo[17.6.2.21,4.022,26]nonacosa-17,19(27),20,22(26)-tetraene-5,8,24-trione;

(7R,17E)-9-methyl-7-[(7-methyl-1H-indazol-5-yl)methyl]-6,12,15,25-tetraoxa-4,9,21,23-tetrazatetracyclo[17.6.2.21,4.022,26]nonacosa-17,19(27),20,22(26)-tetraene-5,8,24-trione;

(7R,20E)-9-methyl-7-[(7-methyl-1H-indazol-5-yl)methyl]-6,12,15,18,28-pentaoxa-4,9,24,26-tetrazatetracyclo[20.6.2.21,4.025,29]dotriaconta-20,22(30),23,25(29)-tetraene-5,8,27-trione;

(7R,17E)-9-methyl-7-[(7-methyl-1H-indazol-5-yl)methyl]-6,15,25-trioxa-4,9,21,23-tetrazatetracyclo[17.6.2.21,4.022,26]nonacosa-17,19(27),20,22(26)-tetraene-5,8,24-trione;

(7R,18E)-9-methyl-7-[(7-methyl-1H-indazol-5-yl)methyl]-6,13,16,26-tetraoxa-4,9,22,24-tetrazatetracyclo[18.6.2.21,4.023,27]triaconta-18,20(28),21,23(27)-tetraene-5,8,25-trione;

(7R)-9-methyl-7-[(7-methyl-1H-indazol-5-yl)methyl]-6,12,15,18,28-pentaoxa-4,9,24,26-tetrazatetracyclo[20.6.2.21,4.025,29]dotriaconta-22(30),23,25(29)-triene-5,8,27-trione;

(7R)-9-methyl-7-[(7-methyl-1H-indazol-5-yl)methyl]-6,15,25-trioxa-4,9,21,23-tetrazatetracyclo[17.6.2.21,4.022,26]nonacosa-19(27),20,22(26)-triene-5,8,24-trione;

(7R)-9-methyl-7-[(7-methyl-1H-indazol-5-yl)methyl]-6,13,16,26-tetraoxa-4,9,22,24-tetrazatetracyclo[18.6.2.21,4.023,27]triaconta-20(28),21,23(27)-triene-5,8,25-trione;

(10R,20E)-12-methyl-10-[(7-methyl-1H-indazol-5-yl)methyl]-15,18-dioxa-9,12,24,26,30-pentazapentacyclo[20.5.2.11,4.13,7.025,28]hentriaconta-3,5,7(30),20,22,24,28-heptaene-8,11,27-trione;

and salts thereof.

19. The compound, or a salt thereof, according to any one of claims 1 to 18 having CGRP receptor antagonist activity.

20. A pharmaceutical composition comprising a compound, or a salt thereof, according to any one of claims 1 to 19 and a pharmaceutically acceptable excipient.

21. The compound, or salt thereof, according to any one of claims 1-19, or composition according to claim 20 for use as a medicine.

22. The compound, or salt thereof, according to any one of claims 1-19, or composition according to claim 20 for use in the treatment of a cerebrovascular or vascular disorder.

23. The compound, or salt thereof, or composition for use according to claim 22, wherein the cerebrovascular or vascular disorders is selected from the group consisting of: migraine (with or without aura), chronic migraine, pure menstrual migraine, frequent episodic migraine, menstrually-related migraine, migraine with aura, familial hemiplegic migraine, sporadic hemiplegic migraine, basilar-type migraine, cyclical vomiting, abdominal migraine, benign paroxysmal vertigo of childhood, retinal migraine, status migrainosus, cluster headache, dialysis headache, chronic headaches of unknown origin, tension/stress induced headaches, allergy induced headaches, paroxysmal hemicrania, osteoarthritis and associated osteoporotic fracture pain, hot flashes associated with menopause or medically induced menopause due to surgery or drug treatment, hemicrania continua, cyclic vomiting syndrome, opiate withdrawal syndrome, morphine tolerance, neurodegenerative disease, epilepsy, allergic rhinitis, rosacea, dental pain, earache, middle ear inflammation, sunburn, joint pain associated with osteoarthritis and rheumatoid arthritis and gout, cancer pain, neuropathic pain (including but not limited to cancer pain in all its various forms including of unexplained origin), dystonic pain, inflammatory pain, post-operative incision pain, sciatica, fibromyalgia, trigeminal neuralgia, diabetic neuropathy, complex regional pain syndrome, Behçet's disease, endometriosis pain, back pain, phantom limb pain, menstrual period pain, pain associated with labour, pain resulting from burns to skin, or visceral pain associated with inflammatory bowel disease (including Crohn’s disease, ileitis and ulcerative colitis), gastro-esophageal reflux disease, dyspepsia, irritable bowel syndrome, renal colic, cystitis, gout, pancreatitis and prostatitis or in the treatment of inflammatory and immune inflammation associated disorders including chronic fatigue syndrome, skin diseases, neurogenic cutaneous redness, skin rosaceousness, erythema, bronchial hyperreactivity, asthma, mast cell activation syndrome, mastocytosis, mast cell degranulation disorder, vascular disorders, shock, sepsis, non-insulin dependent diabetes mellitus, and infectious diseases including those of a respiratory and gastrointestinal origin.

24. The compound, or salt thereof, or composition for use according to claim 23, wherein the cerebrovascular or vascular disorder is a migraine disorder.