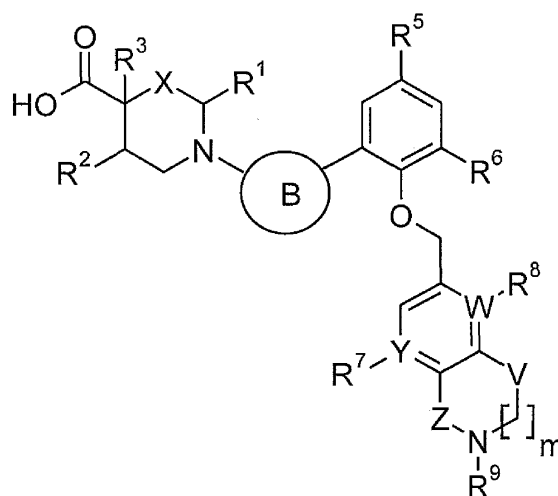


In one aspect, the disclosure provides a compound of the formula I



I,

wherein:

X is CHR⁴ or a bond;

Y is C or N;

W is C or N, provided that Y and W are not both N;

V is -C(R¹¹)(R¹²)- or -OCH₂-, provided that if V is -OCH₂-, then Z is -CH₂-, Y and W are both C;

Z is -CH₂-, -C(R¹⁰)₂CH₂- or -C(O)-;

R¹ is H, Me, or -CH₂OMe;

R² is -OMe or -OEt;

R³ is H or R² and R³ together with the carbons they are bonded to form a fused 3-membered ring;

R⁴ is H or R² and R⁴ form a 2-carbon alkylidene bridge or R₁ and R₄ together with the piperidine ring they are bonded to may form an octahydropyrano[3,2-b]pyridine ring;

In another aspect, the disclosure provides the disclosed compounds for use as medicaments. The disclosure provides the disclosed compounds for use in the treatment of a disease or disorder that can be alleviated by sGC activation or potentiation. In another aspect, the disclosure provides the disclosed compounds for use in the treatment of a disease or disorder that can be alleviated by sGC activation or potentiation wherein the disease or disorder is selected from a cardiovascular disease, inflammatory disease, hepatic fibrotic disorder, skin fibrotic disorder, renal fibrotic disorder, pulmonary fibrotic disorder, cardiac fibrotic disorder, renal disease, diabetes, glaucoma, muscular dystrophy, urologic disorders including overactive bladder, benign prostatic hyperplasia, erectile dysfunction, neurological disorders, including Alzheimer's disease, dementia, Parkinson's disease and neuropathic pain, and diabetic nephropathy. The disclosure provides the use of the disclosed compounds for the manufacture of a medicament for the treatment of a disease or disorder that can be alleviated by sGC activation or potentiation. In another aspect, the disclosure provides the use of the disclosed compounds for the manufacture of a medicament for the treatment of a disease or disorder that can be alleviated by sGC activation or potentiation wherein the disease or disorder is selected from a cardiovascular disease, inflammatory disease, hepatic fibrotic disorder, skin fibrotic disorder, renal fibrotic disorder, pulmonary fibrotic disorder, cardiac fibrotic disorder, renal disease, diabetes, glaucoma, muscular dystrophy, urologic disorders including overactive bladder, benign prostatic hyperplasia, erectile dysfunction, neurological disorders, including Alzheimer's disease, dementia, Parkinson's disease and neuropathic pain, and diabetic nephropathy.

In another aspect, the disclosure provides pharmaceutical compositions comprising the disclosed compounds and a pharmaceutically acceptable excipient or carrier. There is also provided methods of using these compounds in the treatment of various diseases and disorders, processes for preparing these compounds and intermediates useful in these processes.

The present disclosure provides activators of soluble guanylate cyclase having solubility properties consistent with acceptable pharmacokinetic properties. As is known in the art, poorly soluble compounds may suffer from poor human exposure. The compounds of the

present disclosure would be expected to have exposure properties consistent with being a suitable drug.

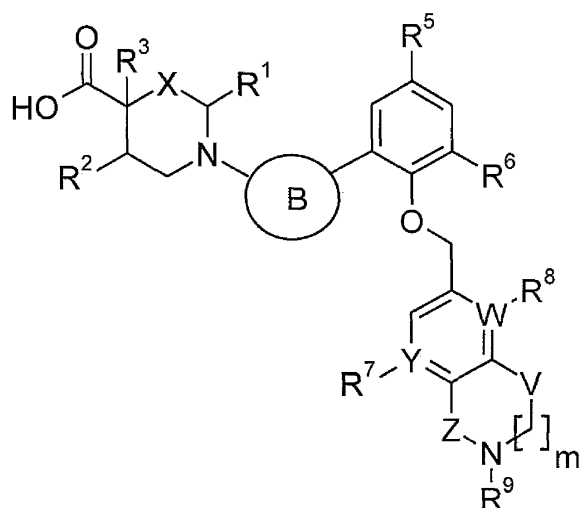
The present disclosure provides compounds with metabolic stability properties consistent with acceptable pharmacokinetic properties. As is known in the art, compounds having poor metabolic stability may not readily achieve desirable therapeutic levels. The compounds of the present disclosure would be expected to have metabolic stability properties consistent with being a suitable drug.

DETAILED DESCRIPTION OF THE INVENTION

In an embodiment (1), there are provided compounds of the formula I

What is claimed is:

1. A compound of the formula I



I,

wherein:

X is CHR⁴ or a bond;

Y is C or N;

W is C or N, provided that Y and W are not both N;

V is -C(R¹¹)(R¹²)- or -OCH₂-, provided that if V is -OCH₂-, then Z is -CH₂-, Y and W are both C;

Z is -CH₂-, -C(R¹⁰)₂CH₂- or -C(O)-;

R¹ is H, Me, or -CH₂OMe;

R² is -OMe or -OEt;

R³ is H or R² and R³ together with the carbons they are bonded to form a fused 3-membered ring;

Y is C or N;

W is C;

V is $-C(R^{11})(R^{12})-$;

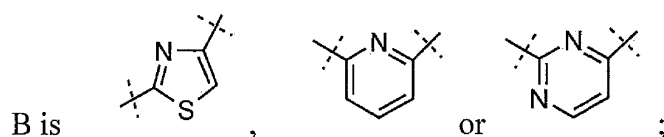
Z is $-CH_2-$, $-C(R^{10})_2CH_2-$ or $-C(O)-$;

R^1 is H, Me, or $-CH_2OMe$;

R^2 is $-OMe$ or $-OEt$;

R^3 is H or R^2 and R^3 together with the carbons they are bonded to form a fused 3-membered ring;

R^4 is H or R^2 and R^4 form a 2-carbon alkylidene bridge;



R^5 and R^6 are independently selected from H, Me, F and Cl;

R^7 is H, Me, Et, $-OMe$, CN, or F or is not present when Y is N;

R^8 is H, Me or F;

R^9 is C_{4-6} cycloalkyl, optionally substituted with one to two F, or R^9 is $-(CH_2)_n$ heterocyclyl, wherein the heterocyclyl is selected from tetrahydropyranyl, tetrahydrofuranyl, oxetanyl and [1,4]-dioxanyl ;

each R^{10} is independently H or Me;

R^{11} is H or Me;

R^{12} is H or Me;

m is 1; and

n is 0 or 1;

or a salt thereof.

3. The compound according to claim 1 or 2, wherein:

m is 1;

or a salt thereof.

10. The compound according to any one of claims 1 to 9, wherein

X is a bond;

Y is C;

W is C;

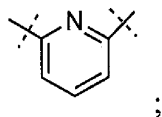
V is $-C(R^{11})(R^{12})-$;

Z is $-CH_2-$ or $-C(R^{10})_2CH_2$;

R^1 is H Me or $-CH_2OMe$;

R^2 and R^3 together with the carbons they are bonded to form a fused 3-membered ring;

B is



R^7 is H, Me, Et, $-OMe$, CN, F, or $-CH_2OMe$;

R^8 is H, Me or F;

R^9 is $-(CH_2)_n$ heterocyclyl, wherein the heterocyclyl is selected from tetrahydropyranyl, tetrahydrofuranyl, oxetanyl and [1,4]-dioxanyl;

R^{11} is H;

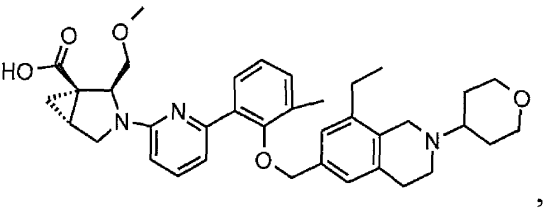
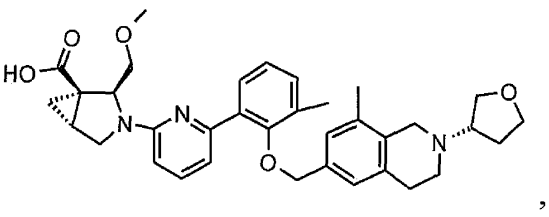
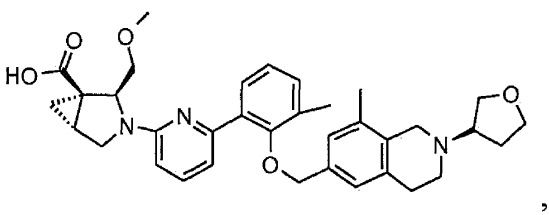
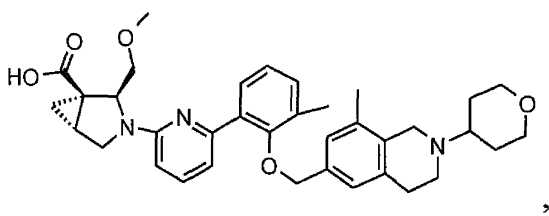
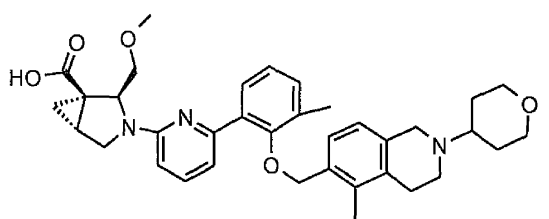
R^{12} is H;

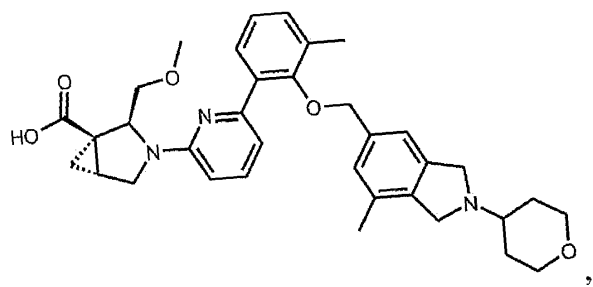
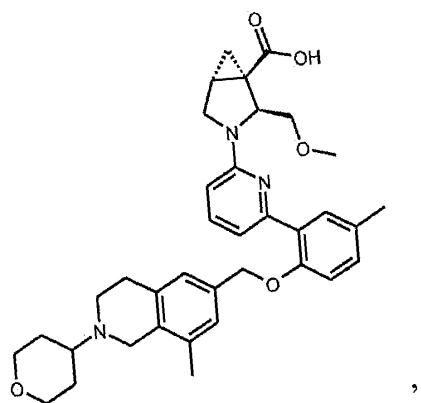
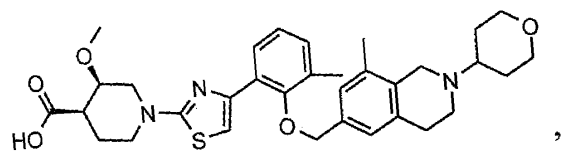
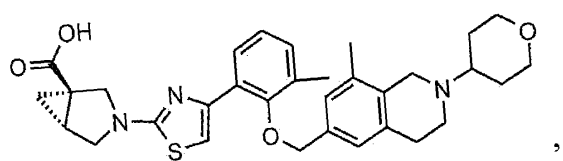
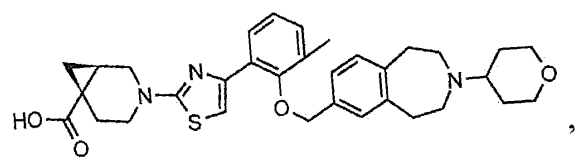
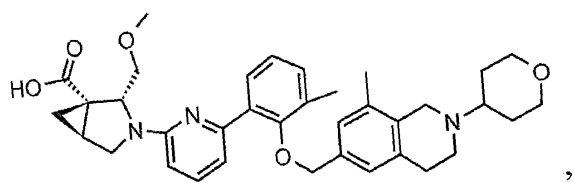
n is 0; and

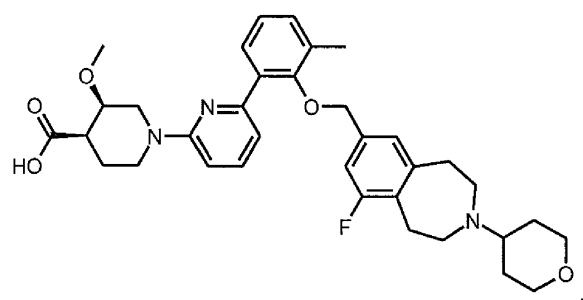
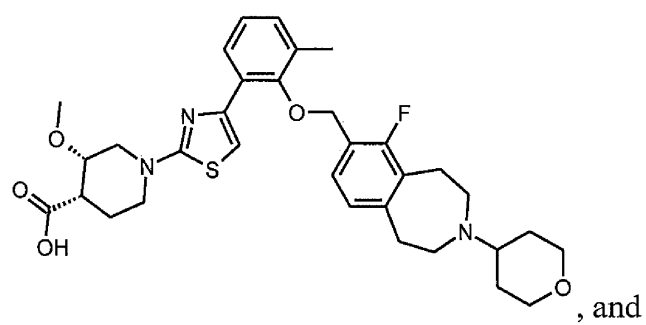
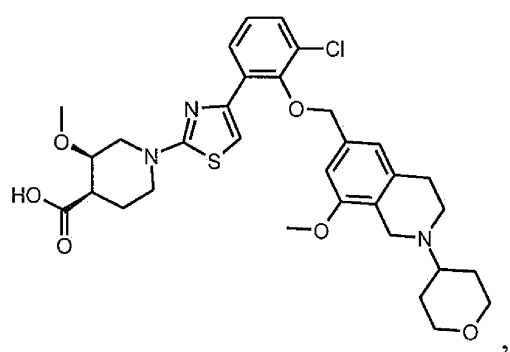
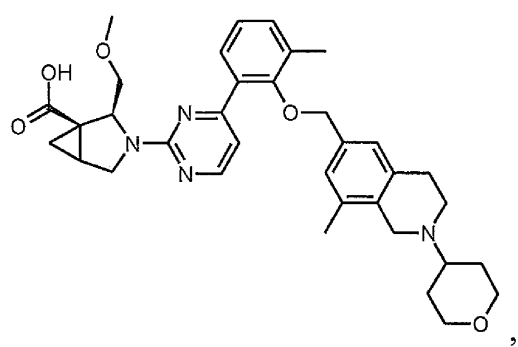
m is 1;

or a salt thereof.

11. The compound according to any one of claims 1 to 10, selected from the group consisting of







12. A pharmaceutical composition comprising a compound according to any one of claims 1 to 11 and a pharmaceutically acceptable excipient or carrier.
13. A compound according to any one of claims 1 to 11 for use as a medicament.

14. A compound according to any one of claims 1 to 11 for use in the treatment of a disease or disorder that can be alleviated by sGC activation or potentiation wherein the disease or disorder is selected from a cardiovascular disease, inflammatory disease, hepatic fibrotic disorder, skin fibrotic disorder, renal fibrotic disorder, pulmonary fibrotic disorder, cardiac fibrotic disorder, renal disease, diabetes, glaucoma, muscular dystrophy, urologic disorders including overactive bladder, benign prostatic hyperplasia, erectile dysfunction, neurological disorders, including Alzheimer's disease, dementia, Parkinson's disease and neuropathic pain, and diabetic nephropathy.

15. Use of a compound according to any one of claims 1 to 11 for the manufacture of a medicament for the treatment of a disease or disorder that can be alleviated by sGC activation or potentiation wherein the disease or disorder is selected from a cardiovascular disease, inflammatory disease, hepatic fibrotic disorder, skin fibrotic disorder, renal fibrotic disorder, pulmonary fibrotic disorder, cardiac fibrotic disorder, renal disease, diabetes, glaucoma, muscular dystrophy, urologic disorders including overactive bladder, benign prostatic hyperplasia, erectile dysfunction, neurological disorders, including Alzheimer's disease, dementia, Parkinson's disease and neuropathic pain, and diabetic nephropathy.

16. The use according to claim 15 wherein the disease or disorder is selected from a cardiovascular disease, inflammatory disease, hepatic fibrotic disorder, skin fibrotic disorder, renal fibrotic disorder, pulmonary fibrotic disorder and cardiac fibrotic disorder.

17. The use according to claim 15 wherein the disease or disorder is selected from renal disease, diabetes, glaucoma, muscular dystrophy, urologic disorders including overactive bladder, benign prostatic hyperplasia, erectile dysfunction, and neurological disorders including Alzheimer's disease, dementia, Parkinson's disease and neuropathic pain.

18. The use according to claim 15 wherein the disease or disorder is diabetic nephropathy.