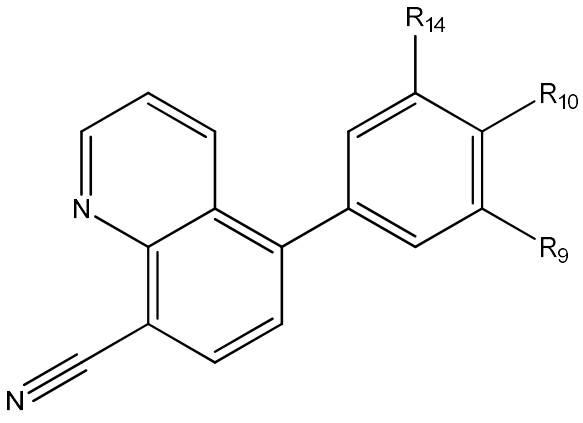
[0011] A further example provides a compound of Formula (III):



(III)

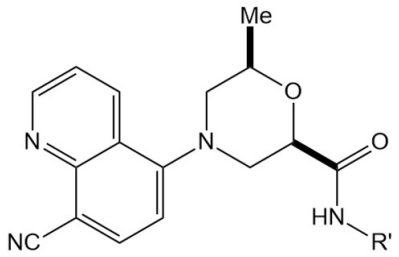
wherein

R_{11} is H or methyl;

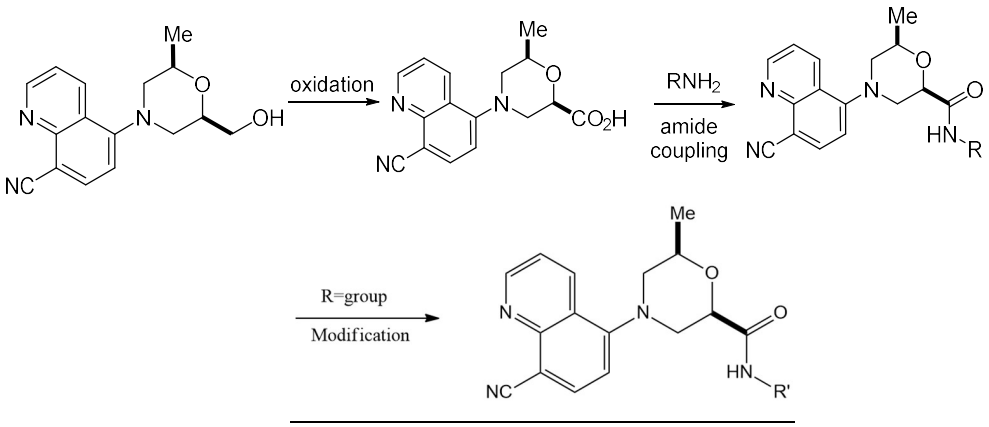
R_{10} is H or, when both R_{14} and R_9 are H, is methyl-1,4'-bipiperidinyl;

R_9 is –H or is $–CH_2$- substituted by 1,4'-bipiperidinyl, oxo-, hydroxyl, methylpyridinyl, or piperidinyl optionally substituted with hydroxyl, $-N(CH_3)_2$, or piperidinyl.

[0011a] In one aspect, the present disclosure refers to a method of preparing a compound of formula

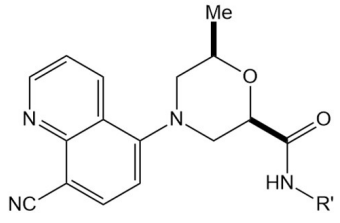


which method comprises the following steps:-



wherein the oxidation conditions comprise reacting the starting compound with 2,2,6,6-tetramethylpiperidine 1-oxyl (TEMPO) and iodobenzene diacetate ($PhI(OAc)_2$), and wherein R' is a C_1-C_6 alkyl that is optionally substituted with: –OH, methoxy, ethoxy, $-OCH(CH_3)_2$, $-O(CH_2)_2CH_3$, phenyl, furanyl, $-O(CH_2)_2OH$, phenoxy, methylthio, -F, $-N(CH_3)_2$, cyano, pyridinyloxy, fluorophenoxy, isochromanyl, phenol, benzylamino, $-NHCH_3$, oxo-, amino, carboxyl, 7-member spiroaminyl, a three to six member cycloalkyl, saturated or unsaturated and optionally including one or more heteroatoms selected from O and N, and optionally substituted at one or more C or N atoms by methyl, cyano, fluoro, methylamino, or trifluoromethyl; or a C_3-C_7 cycloalkane, saturated or unsaturated, optionally bridged, optionally including one or more heteroatoms selected from

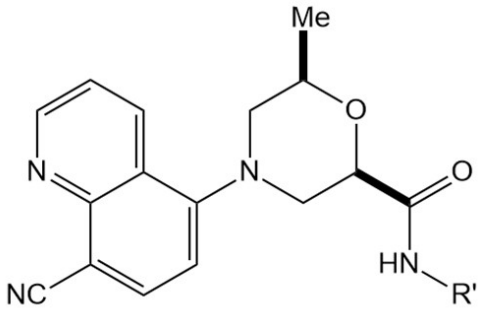
O, S, and N, and optionally substituted at one or more C or N atoms by methyl, ethyl, pyridinyl, azetidinyl, acetamidyl, carboxamidyl, cyano, fluoro, methylamino, or trifluoromethyl.

[0011b] In another aspect, the present disclosure refers to a compound of formula 

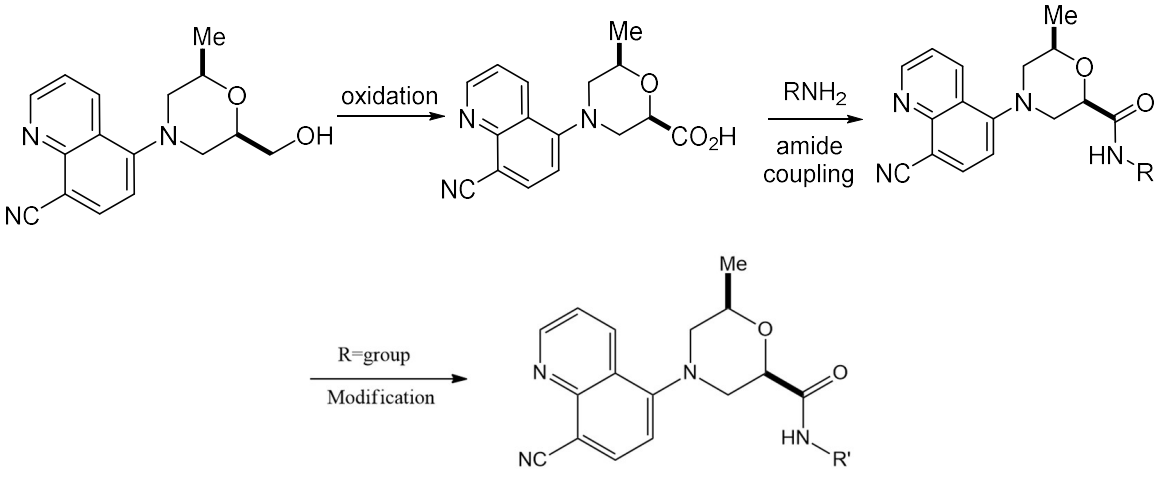
wherein R' is a C_1-C_6 alkyl that is optionally substituted with: –OH, methoxy, ethoxy, -$OCH(CH_3)_2$, -$O(CH_2)_2CH_3$, phenyl, furanyl, -$O(CH_2)_2OH$, phenoxy, methylthio, -F, -$N(CH_3)_2$, cyano, pyridinyloxy, fluorophenoxy, isochromanyl, phenol, benzylamino, -$NHCH_3$, oxo-, amino, carboxyl, 7-member spiroaminyl, a three to six member cycloalkyl, saturated or unsaturated and optionally including one or more heteroatoms selected from O and N, and optionally substituted at one or more C or N atoms by methyl, cyano, fluoro, methylamino, or trifluoromethyl; or a C_3-C_7 cycloalkane, saturated or unsaturated, optionally bridged, optionally including one or more heteroatoms selected from O, S, and N, and optionally substituted at one or more C or N atoms by methyl, ethyl, pyridinyl, azetidinyl, acetamidyl, carboxamidyl, cyano, fluoro, methylamino, or trifluoromethyl; or a pharmaceutically acceptable salt thereof.

We claim:

1. A method of preparing a compound of formula



which method comprises the following steps:



wherein the oxidation conditions comprise reacting the starting compound with 2,2,6,6-tetramethylpiperidine 1-oxyl (TEMPO) and iodobenzene diacetate ($PhI(OAc)_2$), and wherein R' is:

a C_1-C_6 alkyl that is optionally substituted with:

–OH, methoxy, ethoxy, $-OCH(CH_3)_2$, $-O(CH_2)_2CH_3$, phenyl, furanyl, $-O(CH_2)_2OH$, phenoxy, methylthio, -F, $-N(CH_3)_2$, cyano, pyridinyloxy, fluorophenoxy, isochromanyl, phenol, benzylamino, $-NHCH_3$, oxo-, amino, carboxyl, 7-member spiroaminyl, a three to six member cycloalkyl, saturated or unsaturated and optionally including one or more heteroatoms selected

from O and N, and optionally substituted at one or more C or N atoms by methyl, cyano, fluoro, methylamino, or trifluoromethyl; or

a C_3-C_7 cycloalkane, saturated or unsaturated, optionally bridged, optionally including one or more heteroatoms selected from O, S, and N, and optionally substituted at one or more C or N atoms by methyl, ethyl, pyridinyl, azetidinyl, acetamidyl, carboxamidyl, cyano, fluoro, methylamino, or trifluoromethyl.

2. A method according to claim 1, wherein R' is:

ethyl,
isopropyl,
3,4-difluorobenzyl,
cyclopropyl,
2-hydroxyethyl,
2-methoxyethyl,
(*R*)-2-hydroxypropyl,
(*S*)-1-hydroxypropan-2-yl,
(*R*)-1-hydroxypropan-2-yl,
(*S*)-1-hydroxybutan-2-yl,
(*S*)-1-hydroxy-3-methylbutan-2-yl,
(*S*)-2-hydroxy-1-phenylethyl,
(*R*)-2-hydroxy-1-phenylethyl,
2-hydroxybutyl,
2-ethoxyethyl,
(*R*)-1-hydroxybutan-2-yl,
1,3-dihydroxypropan-2-yl,
2,3-dihydroxypropyl,
((*R*)-tetrahydrofuran-2-yl)methyl,
(tetrahydrofuran-2-yl)methyl,
2-propoxyethyl,
(*R*)-1-hydroxypentan-2-yl,
2-isopropoxyethyl,

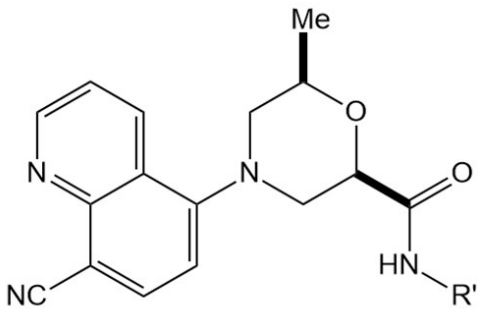
1-methoxybutan-2-yl,
2-(2-fluorophenyl)-2-hydroxyethyl,
(*R*)-1-hydroxy-3-methylbutan-2-yl,
2,2-dimethoxyethyl,
2-(2-hydroxyethoxy)ethyl,
1-hydroxyhexan-2-yl,
(*S*)-1-hydroxy-3,3-dimethylbutan-2-yl;
(*S*)-1-hydroxyhexan-2-yl,
(*2S,3S*)-1-hydroxy-3-methylpentan-2-yl,
(*S*)-1-hydroxy-4-methylpentan-2-yl,
(*R*)-1-hydroxy-4-methylpentan-2-yl,
((4-methylmorpholin-2-yl)methyl,
(*S*)-1-hydroxy-4-(methylthio)butan-2-yl,
2-phenoxyethyl,
(*S*)-1-hydroxy-3-phenylpropan-2-yl,
2-phenoxypropyl,
2-hydroxy-3-phenylpropyl,
(2-(pyridin-3-yloxy)propyl,
2-(4-fluorophenoxy)ethyl,
2-(3-fluorophenyl)-2-hydroxyethyl,
(S)-1-cyclohexyl-3-hydroxypropan-2-yl,
isochroman-1-ylmethyl,
2-hydroxy-3-phenoxypropyl,
(*1S*)-1,3-dihydroxy-1-phenylpropan-2-yl,
2-hydroxy-3-(piperazin-1-yl)propyl,
azetidin-3-yl,
(*S*)-pyrrolidin-3-yl,
(*R*)-pyrrolidin-3-yl,
(*S*)-piperidin-3-yl,
(*R*)-piperidin-3-yl,
(*S*)-pyrrolidin-2-ylmethyl,
2-(benzylamino)ethyl,

pyridin-2-yl,
6-methylpyridin-2-yl,
5-methylisoxazol-3-yl,
2,2,2-trifluoroethyl,
2,2-difluoroethyl,
3,3,3-trifluoropropyl,
(2-(dimethylamino)-2-methylpropyl,
(*S*)-morpholin-2-ylmethyl,
((*S*)-4-methylmorpholin-2-yl)methyl,
2-fluoroethyl,
3-fluoropropyl,
(*S*)-1,1,1-trifluoropropan-2-yl,
(*R*)-1,1,1-trifluoropropan-2-yl,
1,3-dimethyl-1*H*-pyrazol-5-yl,
1-methyl-1*H*-pyrazol-5-yl,
cyanomethyl,1-cyanocyclopropyl,
1,2,4-thiadiazol-5-yl,
3-methyl-1,2,4-thiadiazol-5-yl,
piperidin-4-yl,
(4-fluoropiperidin-4-yl)methyl,
azetidin-3-ylmethyl,
3-carbamoyl-1-methyl-*1H*-pyrazol-4-yl,
oxetan-3-ylmethyl,
tetrahydro-2*H*-pyran-4-yl,
tetrahydrofuran-3-yl,
(3-methyloxetan-3-yl)methyl,
oxetan-3-yl(3-(aminomethyl)oxetan-3-yl)methyl,
oxetan-2-ylmethyl,
2-(methylamino)ethyl,
(S)-3,3,3-trifluoro-2-hydroxypropyl,
(R)-3,3,3-trifluoro-2-hydroxypropyl,
2-(dimethylamino)ethyl,

(S)-4,4,4-trifluoro-3-hydroxybutyl,
(R)-4,4,4-trifluoro-3-hydroxybutyl,
3-amino-4,4,4-trifluorobutyl,
acetic acid,
3-carbamoylpyridin-4-yl,
(R)-morpholin-2-ylmethyl,
pyridin-4-yl,
pyridin-3-yl,
1-(piperidin-4-yl)-*1H*-pyrazol-4-yl,
1-(azetidin-3-yl)-*1H*-pyrazol-4-yl,
(1H-pyrazol-5-yl)methyl,
(1H-pyrazol-4-yl)methyl,
(3-(trifluoromethyl)pyridin-2-yl)methyl,
1-(pyridin-2-yl)ethyl,
pyridin-2-ylmethyl,
(6-methylpyridin-2-yl)methyl,
(1-methylpiperidin-2-yl)methyl,
(3-methylpyridin-2-yl)methyl,
4-cyano-*1H*-pyrazol-3-yl,
(*3S,4R*)-4-fluoro-1-methylpyrrolidin-3-yl,-
(*3S,4R*)-4-fluoropiperidin-3-yl,
((*2R,6R*)-6-methylmorpholin-2-yl)methyl,
(R)-pyrrolidin-2-ylmethyl,
(S)-piperidin-2-ylmethyl,
(*1R,5S,6S*)-3-azabicyclo[3.1.0]hexan-6-yl,
methyl,
((*2S,6R*)-4,6-dimethylmorpholin-2-yl)methyl
1-methylpiperidin-4-yl,
(*3S,4R*)-4-fluoropiperidin-3-yl,
1-(2-amino-2-oxoethyl)piperidin-4-yl,
2-carbamoylpyridin-4-yl,
(S)-piperidin-3-yl,

1-ethylpiperidin-4-yl,
1-ethylpiperidin-3-yl,
(R)-1-methylpiperidin-3-yl,
4-methylpiperidin-4-yl,
2-amino-2-methylpropyl,
(*3R,4S*)-4-fluoropyrrolidin-3-yl,
(*3S,4R*)-4-fluoropyrrolidin-3-yl,
azepan-3-yl,
1-methylazepan-3-yl,
1,4-dimethylpiperidin-4-yl or
4-fluoro-1-methylpiperidin-3-yl.

3. A compound of formula



wherein R' is

a C_1-C_6 alkyl that is optionally substituted with:

–OH, methoxy, ethoxy, -$OCH(CH_3)_2$, -$O(CH_2)_2CH_3$, phenyl, furanyl, -$O(CH_2)_2OH$, phenoxy, methylthio, -F, -$N(CH_3)_2$, cyano, pyridinyloxy, fluorophenoxy, isochromanyl, phenol, benzylamino, -$NHCH_3$, oxo-, amino, carboxyl, 7-member spiroaminyl, a three to six member cycloalkyl, saturated or unsaturated and optionally including one or more heteroatoms selected from O and N, and optionally substituted at one or more C or N atoms by methyl, cyano, fluoro, methylamino, or trifluoromethyl; or

a C_3-C_7 cycloalkane, saturated or unsaturated, optionally bridged, optionally including one or more heteroatoms selected from O, S, and N, and optionally substituted at one or more C or N atoms by methyl, ethyl, pyridinyl, azetidinyl, acetamidyl, carboxamidyl, cyano, fluoro, methylamino, or trifluoromethyl;

or a pharmaceutically acceptable salt thereof.

4. A compound according to claim 3, or a pharmaceutically acceptable salt thereof, wherein R' is selected from

ethyl,
isopropyl,
3,4-difluorobenzyl,
cyclopropyl,
2-hydroxyethyl,
2-methoxyethyl,
(*R*)-2-hydroxypropyl,
(*S*)-1-hydroxypropan-2-yl,
(*R*)-1-hydroxypropan-2-yl,
(*S*)-1-hydroxybutan-2-yl,
(*S*)-1-hydroxy-3-methylbutan-2-yl,
(*S*)-2-hydroxy-1-phenylethyl,
(*R*)-2-hydroxy-1-phenylethyl,
2-hydroxybutyl,
2-ethoxyethyl,
(*R*)-1-hydroxybutan-2-yl,
1,3-dihydroxypropan-2-yl,
2,3-dihydroxypropyl,
((*R*)-tetrahydrofuran-2-yl)methyl,
(tetrahydrofuran-2-yl)methyl,
2-propoxyethyl,
(*R*)-1-hydroxypentan-2-yl,
2-isopropoxyethyl,

1-methoxybutan-2-yl,
2-(2-fluorophenyl)-2-hydroxyethyl,
(*R*)-1-hydroxy-3-methylbutan-2-yl,
2,2-dimethoxyethyl,
2-(2-hydroxyethoxy)ethyl,
1-hydroxyhexan-2-yl,
(*S*)-1-hydroxy-3,3-dimethylbutan-2-yl;
(*S*)-1-hydroxyhexan-2-yl,
(*2S,3S*)-1-hydroxy-3-methylpentan-2-yl,
(*S*)-1-hydroxy-4-methylpentan-2-yl,
(*R*)-1-hydroxy-4-methylpentan-2-yl,
((4-methylmorpholin-2-yl)methyl,
(*S*)-1-hydroxy-4-(methylthio)butan-2-yl,
2-phenoxyethyl,
(*S*)-1-hydroxy-3-phenylpropan-2-yl,
2-phenoxypropyl,
2-hydroxy-3-phenylpropyl,
(2-(pyridin-3-yloxy)propyl,
2-(4-fluorophenoxy)ethyl,
2-(3-fluorophenyl)-2-hydroxyethyl,
(S)-1-cyclohexyl-3-hydroxypropan-2-yl,
isochroman-1-ylmethyl,
2-hydroxy-3-phenoxypropyl,
(*1S*)-1,3-dihydroxy-1-phenylpropan-2-yl,
2-hydroxy-3-(piperazin-1-yl)propyl,
azetidin-3-yl,
(*S*)-pyrrolidin-3-yl,
(*R*)-pyrrolidin-3-yl,
(*S*)-piperidin-3-yl,
(*R*)-piperidin-3-yl,
(*S*)-pyrrolidin-2-ylmethyl,
2-(benzylamino)ethyl,

pyridin-2-yl,
6-methylpyridin-2-yl,
5-methylisoxazol-3-yl,
2,2,2-trifluoroethyl,
2,2-difluoroethyl,
3,3,3-trifluoropropyl,
(2-(dimethylamino)-2-methylpropyl,
(*S*)-morpholin-2-ylmethyl,
((*S*)-4-methylmorpholin-2-yl)methyl,
2-fluoroethyl,
3-fluoropropyl,
(*S*)-1,1,1-trifluoropropan-2-yl,
(*R*)-1,1,1-trifluoropropan-2-yl,
1,3-dimethyl-1*H*-pyrazol-5-yl,
1-methyl-1*H*-pyrazol-5-yl,
cyanomethyl,1-cyanocyclopropyl,
1,2,4-thiadiazol-5-yl,
3-methyl-1,2,4-thiadiazol-5-yl,
piperidin-4-yl,
(4-fluoropiperidin-4-yl)methyl,
azetidin-3-ylmethyl,
3-carbamoyl-1-methyl-*1H*-pyrazol-4-yl,
oxetan-3-ylmethyl,
tetrahydro-2*H*-pyran-4-yl,
tetrahydrofuran-3-yl,
(3-methyloxetan-3-yl)methyl,
oxetan-3-yl(3-(aminomethyl)oxetan-3-yl)methyl,
oxetan-2-ylmethyl,
2-(methylamino)ethyl,
(S)-3,3,3-trifluoro-2-hydroxypropyl,
(R)-3,3,3-trifluoro-2-hydroxypropyl,
2-(dimethylamino)ethyl,

(S)-4,4,4-trifluoro-3-hydroxybutyl,
(R)-4,4,4-trifluoro-3-hydroxybutyl,
3-amino-4,4,4-trifluorobutyl,
acetic acid,
3-carbamoylpyridin-4-yl,
(R)-morpholin-2-ylmethyl,
pyridin-4-yl,
pyridin-3-yl,
1-(piperidin-4-yl)-*1H*-pyrazol-4-yl,
1-(azetidin-3-yl)-*1H*-pyrazol-4-yl,
(1H-pyrazol-5-yl)methyl,
(1H-pyrazol-4-yl)methyl,
(3-(trifluoromethyl)pyridin-2-yl)methyl,
1-(pyridin-2-yl)ethyl,
pyridin-2-ylmethyl,
(6-methylpyridin-2-yl)methyl,
(1-methylpiperidin-2-yl)methyl,
(3-methylpyridin-2-yl)methyl,
4-cyano-*1H*-pyrazol-3-yl,
(*3S,4R*)-4-fluoro-1-methylpyrrolidin-3-yl,-
(*3S,4R*)-4-fluoropiperidin-3-yl,
((*2R,6R*)-6-methylmorpholin-2-yl)methyl,
(R)-pyrrolidin-2-ylmethyl,
(S)-piperidin-2-ylmethyl,
(*1R,5S,6S*)-3-azabicyclo[3.1.0]hexan-6-yl,
methyl,
((*2S,6R*)-4,6-dimethylmorpholin-2-yl)methyl
1-methylpiperidin-4-yl,
(*3S,4R*)-4-fluoropiperidin-3-yl,
1-(2-amino-2-oxoethyl)piperidin-4-yl,
2-carbamoylpyridin-4-yl,
(S)-piperidin-3-yl,

1-ethylpiperidin-4-yl,
1-ethylpiperidin-3-yl,
(R)-1-methylpiperidin-3-yl,
4-methylpiperidin-4-yl,
2-amino-2-methylpropyl,
(*3R,4S*)-4-fluoropyrrolidin-3-yl,
(*3S,4R*)-4-fluoropyrrolidin-3-yl,
azepan-3-yl;
1-methylazepan-3-yl,
1,4-dimethylpiperidin-4-yl or
4-fluoro-1-methylpiperidin-3-yl.