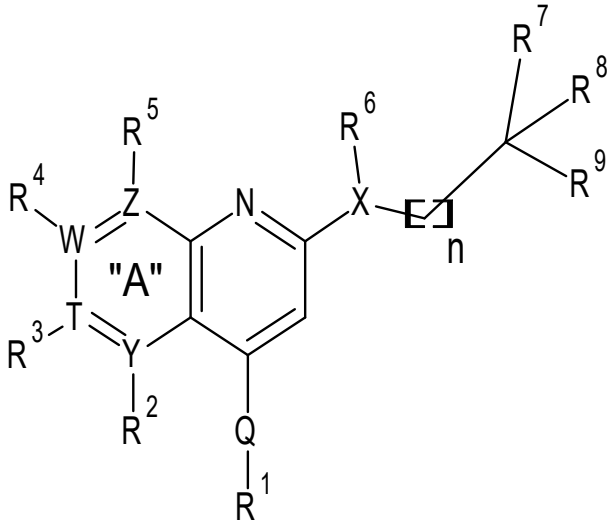
Summary

In one aspect, the present disclosure relates to a compound of Formula I comprising:



Formula I

or pharmaceutically acceptable salts or esters thereof, wherein:

$R^1 – R^9$ are independently hydrogen, CN, COOH, $CONH_2$, $B(OR_a)_2$ (where R_a is H or alkyl), an acid isostere, halo, C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, aminoalkyl, haloalkyl, heteroaryl, cycloalkyl, or heterocycloalkyl,

wherein any of $R^2 – R^9$ may be bonded with an adjoining R group thereby forming a fused cycloalkyl, fused heterocycloalkyl, fused aryl, or fused heteroaryl ring having from 4 to 10 carbon atoms;

wherein each of said C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, heteroaryl, cycloalkyl, or heterocycloalkyl is either unsubstituted or substituted with 1, 2, 3, 4 or 5 substituents which can be the same or different and are independently selected from the group consisting of hydrogen, deuterium, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, $-S(O)_2$-alkyl, $-S(O)_2$-aryl, -C(O)alkyl; $-C_q$-U-C_q, where each q is independently 0 to 10 and U is any one of aryl, heteroaryl, cycloalkyl, heterocycloalkyl ,O, S, SO_2, or $N(R_1)$ (R_1),

wherein each R_1 is independently hydrogen, C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, heteroaryl, cycloalkyl, or heterocycloalkyl is either unsubstituted or substituted with 1, 2, 3,

4 or 5 substituents which can be the same or different and are independently selected from the group consisting of hydrogen, deuterium, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, $-S(O)_2$-alkyl, $-S(O)_2$-aryl, -C(O)alkyl;

Q is a bond or O;

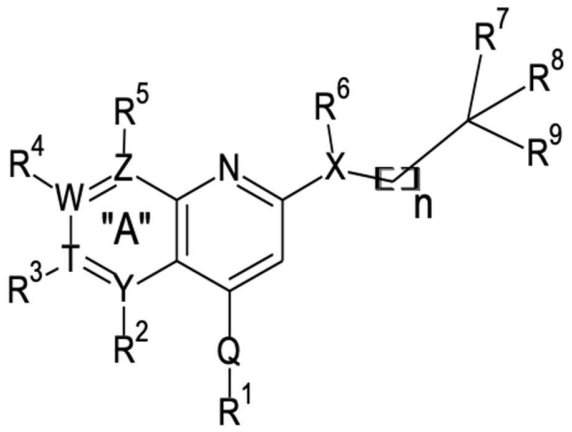
X is C, N, O, or S, with the proviso that R^6 is not present if X is O or S;



wherein "A" is a saturated or unsaturated ring depicted by and Y, T, W, and Z are independently a bond, C, N, O, or alkyl or alkenyl having 1 to 4 carbon atoms; and

n is 0, 1, 2, or 3.

The present disclosure, relates to a compound of Formula (I), or pharmaceutically acceptable salts or esters thereof:



Formula I

wherein each of R^1 and R^6-R^9 are independently -H, -CN, -COOH, $-CONH_2$, $B(OR_a)_2$, an acid isostere, a halo, C_n alkyl, C_n alkenyl, C_n alkynyl, C_n aryl, C_n aminoalkyl, C_n haloalkyl, C_n heteroaryl, C_n cycloalkyl, or C_n heterocycloalkyl,

wherein R_a of the $B(OR_a)_2$ is H or an alkyl,

wherein B of the $B(OR_a)_2$ is boron,

wherein n of the C_n is 1 – 10,

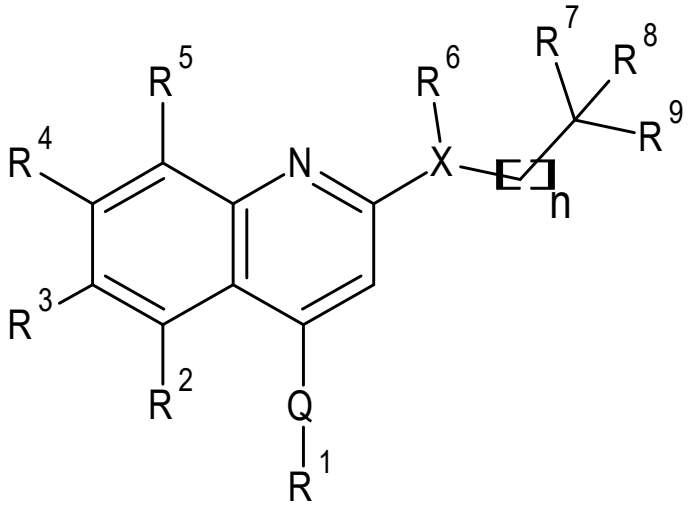
wherein each of R^2 – R^5 are independently -H, -CN, -COOH, -COOMe, -$CONH_2$, $B(OR_a)_2$, the acid isostere, the halo, -CONHOH, -NH-SO_2-C1-C_6-alkyl, -$NHSO_2$Ar, the C_n alkyl, the C_n alkyl, the C_n alkenyl, the C_n alkynyl, the C_n aryl, the C_n aminoalkyl, the C_n haloalkyl, the C_n heteroaryl, the C_n cycloalkyl, or the C_n heterocycloalkyl,

wherein the Ar of -$NHSO_2$Ar is selected from the group consisting of: phenyl, naphthyl, pyrrole, imidazole, thiophene, furan, thiazole, isothiazole, thiadiazole, oxazole, isoxazole, oxadiazole, pyridine, pyrazine, pyrimidine, pyridazine, pyrazole, triazole, tetrazole, chroman, isochroman, quinoline, quinoxaline, isoquinoline, phthalazine, cinnoline, quinazoline, indole, isoindole, indoline, isoindoline, benzothiophene, benzofuran, isobenzofuran, benzoxazole, 2,1,3-benzoxadiazole, benzothiazole, 2,1,3-benzothiazole, 2,1,3-benzoselenadiazole, benzimidazole,

wherein n is 0, 1, 2, or 3.

In one example, the disclosure comprises the compound of Formula I where at least one of R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5, R^6 and R^7, R^7 and R^8, R^8 and R^9 are bonded forming a fused heteroaryl or fused heterocycloalkyl.

In another aspect, there is provided a compound of Formula II comprising:



Formula II

or pharmaceutically acceptable salts or esters thereof wherein:

$R^1 – R^9$ are independently hydrogen, CN, COOH, $CONH_2$, $B(OR_a)_2$ (where R_a is H or alkyl), an acid isostere, halo, C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, aminoalkyl, haloalkyl, heteroaryl, cycloalkyl, or heterocycloalkyl,

wherein any of $R^2 – R^9$ may be bonded with an adjoining R group thereby forming a fused cycloalkyl, fused heterocycloalkyl, fused aryl, or fused heteroaryl ring having from 4 to 10 carbon atoms and wherein each of said C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, heteroaryl, cycloalkyl, or heterocycloalkyl is either unsubstituted or substituted with 1, 2, 3, 4 or 5 substituents which can be the same or different and are independently selected from the group consisting of hydrogen, deuterium, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-,

-$S(O)_2$-alkyl, -$S(O)_2$-aryl, -C(O)alkyl; -C_q -U-C_q, where each q is independently 0 to 10 and U is any one of aryl, heteroaryl, cycloalkyl, heterocycloalkyl, O, S, SO_2, or $N(R_1)(R_1)$,

wherein each R_1 is independently hydrogen, C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, heteroaryl, cycloalkyl, or heterocycloalkyl is either unsubstituted or substituted with 1, 2, 3, 4 or 5 substituents which can be the same or different and are independently selected from the group consisting of hydrogen, deuterium, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, -$S(O)_2$-alkyl, -$S(O)_2$-aryl, -C(O)alkyl;

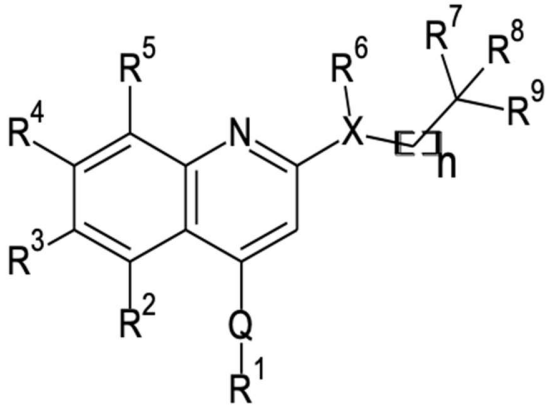
Q is a bond or O;

X is C, N, O, or S, with the proviso that R^6 is not present if X is O or S;

X is C, N, O, or S; and

n is 0, 1, 2, or 3.

The disclosure may be a compound of Formula II or pharmaceutically acceptable salts or esters thereof:



Formula II

wherein R^1 and R^6-R^9 is independently -H, -CN, -COOH, -$CONH_2$, $B(OR_a)_2$, an acid isostere, a halo, C_n alkyl, C_n alkenyl, C_n alkynyl, C_n aryl, C_n aminoalkyl, C_n haloalkyl, C_n heteroaryl, C_n cycloalkyl, or C_n heterocycloalkyl,

wherein R_a of the $B(OR_a)_2$ is H or an alkyl,

wherein B of the $B(OR_a)_2$ is boron,

wherein n of the C_n is 1 – 10,

wherein each of $R^2 – R^5$ are independently -H, -CN, -COOH, -COOMe, -$CONH_2$, $B(OR_a)_2$, the acid isostere, the halo, -CONHOH, -NH-SO_2-Cι-C_6-alkyl, -$NHSO_2$Ar, the C_n alkyl, the C_n alkyl, the C_n alkenyl, the C_n alkynyl, the C_n aryl, the C_n aminoalkyl, the C_n haloalkyl, the C_n heteroaryl, the C_n cycloalkyl, or the C_n heterocycloalkyl,

wherein the Ar of -$NHSO_2$Ar is selected from the group consisting of: phenyl, naphthyl, pyrrole, imidazole, thiophene, furan, thiazole, isothiazole, thiadiazole, oxazole, isoxazole, oxadiazole, pyridine, pyrazine, pyrimidine, pyridazine, pyrazole, triazole, tetrazole, chroman, isochroman, quinoline, quinoxaline, isoquinoline, phthalazine, cinnoline, quinazoline, indole,

isoindole, indoline, isoindoline, benzothiophene, benzofuran, isobenzofuran, benzoxazole, 2,1,3-benzoxadiazole, benzothiazole, 2,1,3-benzothiazole, 2,1,3-benzoselenadiazole, benzimidazole, indazole, benzodioxane, indane, 1,2,3,4-tetrahydroquinoline, 3,4-dihydro-2H-l,4-benzoxazine, 1,5- naphthyridine, 1,8-naphthyridine, acridine, phenazine, and xanthene,

wherein each of the C_n alkyl, the C_n alkenyl, the C_n alkynyl, the C_n aryl, the C_n aminoalkyl, the C_n haloalkyl, the C_n heteroaryl, the C_n cycloalkyl, or the C_n heterocycloalkyl is unsubstituted or substituted with a quantity of substituents being between 1-5,

wherein each of the substituents is the same or different,

wherein each of the substituents is selected from the group consisting of: H, ^2H, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, $-S(O)_2$-alkyl, $-S(O)_2$-aryl, -C(O)alkyl, and $-C_q$-U-C_q,

wherein each q of $-C_q$-U-C_q is independently 0 to 10,

wherein the U of $-C_q$-U-C_q is any one of aryl, heteroaryl, cycloalkyl, heterocycloalkyl, O, S, SO_2, or $N(R_1)(R_1)$,

wherein each R_1 of $N(R_1)(R_1)$ is independently hydrogen, the C_n alkyl, the C_n alkenyl, the C_n alkynyl, the C_n aryl, the C_n aminoalkyl, the C_n haloalkyl, the C_n heteroaryl, the C_n cycloalkyl, or the C_n heterocycloalkyl,

wherein each R_1 of $N(R_1)(R_1)$ is unsubstituted or substituted with 1, 2, 3, 4 or 5 substituents which can be the same or different and are independently selected from the group consisting of: H, ^2H, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, $-S(O)_2$-alkyl, $-S(O)_2$-aryl, and -C(O)alkyl,

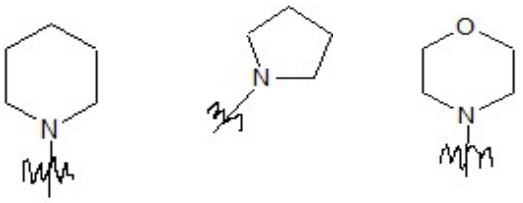
wherein Q is a bond or O,

wherein X is C, N, O, or S such that R^6 is not present if X is O or S,

wherein X is C, N, O, or S, and

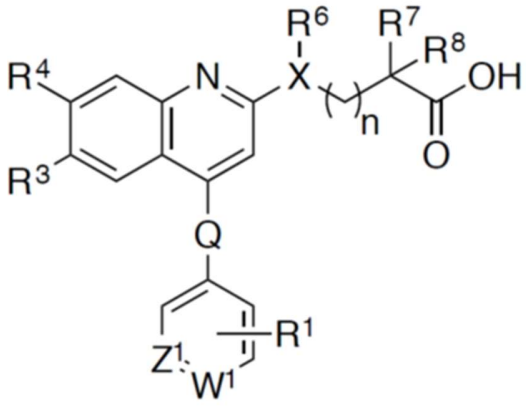
wherein n is 0, 1, 2, or 3.

In some examples, the disclosure includes compounds of Formula II, wherein a heterocycloalkyl group is formed by bonding two of R^7, R^8, or R^9 to form:



, , or .

In another aspect, there is provided a compound of Formula III comprising:



Formula III

or pharmaceutically acceptable salts or esters thereof, wherein:

R^1 is cyano, alkyl, hydrogen, halo, deuterium, amino, alkoxy, aminoalkyl, (amino)alkoxy, alkenyl, alkynyl, alkoxy, hydroxy, alkylhydroxy, aryloxy, alkyl(aryl), (alkoxyalkyl)amino, aryl, aryl(halo), heteroaryl, hydroxyl-alkyl, hydroxyl-aryl, (aryl)alkyl, C(O)OH, -$S(O)_2$-alkyl, -$S(O)_2$-aryl, -C(O)alkyl, or $C(O)NH_2$;

R^3 and R^4 are independently halo or C_1-C_{10} alkyl, -C_q -U-C_q, where each q is independently 0 to 10 and U is any one of O, S, SO_2, or $N(R_1)(R_1)$, wherein each R_1 is independently hydrogen, C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, heteroaryl, cycloalkyl, or heterocycloalkyl is either unsubstituted or substituted with 1, 2, 3, 4 or 5 substituents which can be the same or different and are independently selected from the group consisting of hydrogen, deuterium, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -

heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, -S(O)$_2$-alkyl, -S(O)$_2$-aryl, -C(O)alkyl;

R^6 is independently H or alkyl;

R^7 and R^8 are independently hydrogen, deuterium, fluoro or alkyl;

wherein R^6 – R^7 may be bonded with an adjoining R group thereby forming a fused cycloalkyl, fused heterocycloalkyl, fused aryl, or fused heteroaryl ring having from 4 to 10 carbon atoms and wherein each of said C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, heteroaryl, cycloalkyl, or heterocycloalkyl is either unsubstituted or substituted with 1, 2, 3, 4 or 5 substituents which can be the same or different and are independently selected from the group consisting of hydrogen, deuterium, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, -S(O)$_2$-alkyl, -S(O)$_2$-aryl, -C(O)alkyl

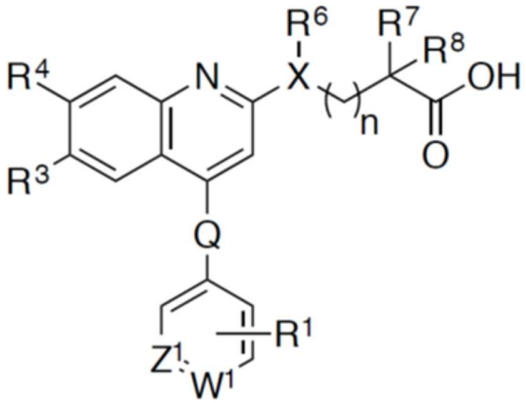
n is 0 or 1;

Q is a bond or O;

X is C, N, O, or S, with the proviso that R^6 is not present if X is O or S; and

Z^1 or W^1 are independently C, N, O, or S.

The disclosure also include compounds of Formula III or pharmaceutically acceptable salts or esters thereof:



Formula III

wherein R^1 is selected from the group consisting of: -CN, alkyl, -H, halo, ^{2}H, amino, alkoxy, aminoalkyl, (amino)alkoxy, alkenyl, alkynyl, alkoxy, hydroxy, alkylhydroxy, aryloxy,

alkyl(aryl), (alkoxyalkyl)amino, aryl, aryl(halo), heteroaryl, hydroxyl-alkyl, hydroxyl-aryl, (aryl)alkyl, C(O)OH, -$S(O)_2$-alkyl, -$S(O)_2$-aryl, -C(O)alkyl, and $C(O)NH_2$,

wherein each of R^3 and R^4 are independently -H, the halo, C_n alkyl, C_n alkyl, C_n alkenyl, C_n alkynyl, C_n aryl, C_n aminoalkyl, C_n haloalkyl, C_n heteroaryl, C_n cycloalkyl, C_n heterocycloalkyl, and -C_q-U-C_q,

wherein n of C_n is 1 – 10,

wherein each q of -C_q-U-C_q is independently 0 to 10,

wherein the U of -C_q-U-C_q is any one of O, S, SO_2, or $N(R_1)(R_1)$,

wherein each R_1 of $N(R_1)(R_1)$ are independently hydrogen,

wherein each of the C_n alkyl, the C_n alkenyl, the C_n alkynyl, the C_n aryl, the C_n aminoalkyl, the C_n haloalkyl, the C_n heteroaryl, the C_n cycloalkyl, and the C_n heterocycloalkyl are unsubstituted or substituted with a quantity of substituents being between 1-5,

wherein each of the substituents are the same or different,

wherein each of the substituents is selected from the group consisting of: H, ^{2}H, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, -S(O)$_2$-alkyl, -S(O)$_2$-aryl, and -C(O)alkyl,

wherein R^6 is independently H or alkyl,

wherein each of R^7 and R^8 are independently hydrogen, ^{2}H, fluoro or alkyl,

wherein R^6 and R^7 are bonded with an adjoining R group to form a fused group,

wherein the fused group is selected from the group consisting of: a fused cycloalkyl, a fused heterocycloalkyl, a fused aryl, and a fused heteroaryl ring,

wherein the fused group comprises between 4 to 10 carbon atoms,

wherein n of Formula III is 0 or 1,

wherein Q is a bond or O,

wherein X is C, N, O, or S such that R^6 is not present if X is O or S, and

wherein Z^1 or W^1 are independently C, N, O, or S.

Another example of the disclosure includes compounds of Formula III wherein X is N.

An example the disclosure includes compounds of Formula III wherein R^6 is hydrogen and X is N.

A further example the disclosure includes compounds of Formula III wherein R^3 is alkyl and R^1 is cyano.

An additional example the disclosure includes compounds of Formula III wherein X is N and n=0.

An example the disclosure includes compounds of Formula III wherein X is N and n=1.

In another aspect, there is provided a compound selected from the group consisting of: 3-{[6-butyl-4-(4-fluorophenyl)quinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 3-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 2-{[4-(4-fluorophenyl)-6-pentylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-hexyl-3-methyl-4-(morpholin-4-

yl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-hexyl-3-methylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4,6-bis(4-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl](2-methylpropyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl](propyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl]amino}acetic acid, 2-{ethyl[4-(4-fluorophenyl)-6-hexylquinolin-2-yl]amino}acetic acid, 2-{[6-hexyl-4-(pyridin-3-yloxy)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-hexyl-4-(pyridin-4-yloxy)quinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-fluorophenoxy)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenoxy)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-octylquinolin-2-yl](2-methylpropyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-octylquinolin-2-yl](propyl)amino}acetic acid, 2-{ethyl[4-(4-fluorophenyl)-6-octylquinolin-2-yl]amino}acetic acid, 2-{methyl[6-octyl-4-(pyridin-3-yloxy)quinolin-2-yl]amino}acetic acid, 2-{methyl[6-octyl-4-(pyridin-4-yloxy)quinolin-2-yl]amino}acetic acid, 2-{[4-(3-fluorophenoxy)-6-octylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenoxy)-6-octylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-decyl-4-(4-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-heptylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-octylquinolin-2-yl](methyl)amino}acetic acid, 2-[(6-hexylquinolin-2-yl)(methyl)amino]acetic acid, 2-{2-[(carboxymethyl)(methyl)amino]-6-hexylquinolin-4-yl}benzoic acid, 2-{[4-(4,4-difluoropiperidin-1-yl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3,3-difluoropyrrolidin-1-yl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-hexyl-4-(morpholin-4-yl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(2-methyl-pyridin-4-yl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3,5-dimethyl-1,2-oxazol-4-yl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-cyanophenyl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 3-{[4-(3-cyanophenyl)-6-hexylquinolin-2-yl](methyl)amino}butanoic acid, 3-[(6-hexyl-4-phenylquinolin-2-yl)(methyl)amino]-2-methylpropanoic acid, 2-[methyl(6-pentanamido-4-phenylquinolin-2-yl)amino]acetic acid, 2-{methyl[6-(pentyloxy)-4-phenylquinolin-2-yl]amino}acetic acid, 2-[(7-bromo-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 2-[(7-hexyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 2-[methyl(6-octyl-4-phenylquinolin-2-yl)amino]acetic acid, 3-{[6-hexyl-4-(pyridin-3-yl)quinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 2-{[6-hexyl-4-(pyridin-3-yl)quinolin-2-

yl](methyl)amino}acetic acid, 2-{[4-(3-cyanophenyl)-6-hexylquinolin-2-yl]oxy}acetic acid, 3-{[4-(3-cyanophenyl)-6-hexylquinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 2-{[4-(3-cyanophenyl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 1-[6-hexyl-4-(pyridin-3-yl)quinolin-2-yl]piperidine-3-carboxylic acid, 1-(6-hexyl-4-phenylquinolin-2-yl)piperidine-3-carboxylic acid, 2-{[6-butyl-4-(4-hydroxyphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-hydroxyphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(2-hydroxyphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(4-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(2-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(4-methylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-methylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(2-methylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(4-cyanophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(4-carbamoylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(pyridin-4-yl)quinolin-2-yl](methyl)amino}acetic acid, 6-butyl-2-(carboxymethoxy)-4-phenylquinoline-3-carboxylic acid, 2-{[6-butyl-4-(pyridin-3-yl)quinolin-2-yl](methyl)amino}acetic acid, 1-[6-butyl-4-(3-cyanophenyl)quinolin-2-yl]piperidine-3-carboxylic acid, 4-(6-butyl-4-phenylquinolin-2-yl)morpholine-2-carboxylic acid, 1-(6-butyl-4-phenylquinolin-2-yl)piperidine-3-carboxylic acid, 3-{[6-butyl-4-(3-cyanophenyl)quinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 3-{[6-butyl-4-(pyridin-3-yl)quinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 3-[(6-butyl-4-phenylquinolin-2-yl)(methyl)amino]-2-methylpropanoic acid, 3-[(6-butyl-4-phenylquinolin-2-yl)(methyl)amino]butanoic acid, 3-[(6-butyl-4-phenylquinolin-2-yl)(methyl)amino]propanoic acid, N-(6-butyl-4-(3-cyanophenyl)quinolin-2-yl)-N-methylvaline, 2-{[4-(3-cyanophenyl)-6-pentylquinolin-2-yl]oxy}acetic acid, 2-{[4-(3-carbamoylphenyl)-6-pentylquinolin-2-yl]oxy}acetic acid, 2-{[4-(3-cyanophenyl)-6-propylquinolin-2-yl]oxy}acetic acid, 2-{[4-(3-carbamoylphenyl)-6-propylquinolin-2-yl]oxy}acetic acid, 2-{[4-(3-carbamoylphenyl)-6-ethylquinolin-2-yl]oxy}acetic acid, 2-{[6-bromo-4-(3-cyanophenyl)quinolin-2-yl]oxy}acetic acid, 2-{[6-bromo-4-(3-carbamoylphenyl)quinolin-2-yl]oxy}acetic acid, 2-{[6-butyl-4-(3-cyanophenyl)quinolin-2-yl]oxy}acetic acid, 2-{[6-butyl-4-(3-carbamoylphenyl)quinolin-2-yl]oxy}acetic acid, 2-{[4-(3-cyanophenyl)-6-pentylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-carbamoylphenyl)-6-

pentylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-cyanophenyl)-6-propylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-carbamoylphenyl)-6-propylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-cyanophenyl)-6-ethylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-carbamoylphenyl)-6-ethylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-bromo-4-(3-cyanophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-bromo-4-(3-carbamoylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-cyanophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-carbamoylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{2-[(6-chloro-4-phenylquinolin-2-yl)(methyl)amino]acetamido}acetic acid, 2-[methyl(6-pentyl-4-phenylquinolin-2-yl)amino]acetic acid, 2-[methyl(4-phenyl-6-propylquinolin-2-yl)amino]acetic acid, 2-[(6-ethyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 1-(6-hexyl-4-phenylquinolin-2-yl)pyrrolidine-2-carboxylic acid, 6-hexyl-4-phenyl-2-(piperidin-1-yl)quinoline, 2-[(6-hexyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 1-(6-butyl-4-phenylquinolin-2-yl)pyrrolidine-2-carboxylic acid, 6-butyl-4-phenyl-2-(piperidin-1-yl)quinoline, 2-[(6-bromo-4-phenylquinolin-2-yl)oxy]acetic acid, 2-[(6-bromo-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 2-[(6-pentyl-4-phenylquinolin-2-yl)oxy]acetic acid, 2-[(4-phenyl-6-propylquinolin-2-yl)oxy]acetic acid, 2-[(6-ethyl-4-phenylquinolin-2-yl)oxy]acetic acid, 2-[(6-chloro-4-phenylquinolin-2-yl)oxy]acetic acid, 2-[(6-butyl-4-phenylquinolin-2-yl)oxy]acetic acid, 2-[(6-butyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 1-(6-chloro-4-phenylquinolin-2-yl)pyrrolidine-2-carboxylic acid, 2-[(6-chloro-4-phenylquinolin-2-yl)(methyl)amino]propanoic acid, 2-[(6-chloro-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 6-chloro-4-phenyl-2-(piperidin-1-yl)quinoline, 3-{[6-butyl-4-(4-fluorophenyl)quinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 2-[methyl(6-octyl-4-phenylquinolin-2-yl)amino]acetic acid, 2-{[6-butyl-4-(4-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{methyl[6-octyl-4-(pyridin-3-yloxy)quinolin-2-yl]amino}acetic acid, 2-{[6-butyl-4-(3-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-[(6-hexyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 2-{[4-(4-fluorophenoxy)-6-octylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-methylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-[(6-butyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 2-{[6-decyl-4-(4-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-[methyl(4-phenyl-6-propylquinolin-2-yl)amino]acetic acid, 2-{[6-butyl-4-(4-methylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 3-[(6-butyl-4-phenylquinolin-2-

yl)(methyl)amino]-2-methylpropanoic acid, 2-{[4-(4-fluorophenyl)-6-pentylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-cyanophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(2-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-hexyl-4-(pyridin-3-yloxy)quinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-fluorophenoxy)-6-octylquinolin-2-yl](methyl)amino}acetic acid, 2-[methyl(6-pentyl-4-phenylquinolin-2-yl)amino]acetic acid, 3-[(6-hexyl-4-phenylquinolin-2-yl)(methyl)amino]-2-methylpropanoic acid, 2-{[4-(3-cyanophenyl)-6-propylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-hexyl-4-(morpholin-4-yl)quinolin-2-yl](methyl)amino}acetic acid, 3-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 2-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 3-{[4-(3-cyanophenyl)-6-hexylquinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 2-[methyl({6-[2-(4-methylphenyl)ethyl]-4-phenylquinolin-2-yl})amino]acetic acid, 2-[methyl({6-[2-(3-methylphenyl)ethyl]-4-phenylquinolin-2-yl})amino]acetic acid, 6-hexyl-N-methyl-4-phenyl-N-[(2H-1,2,3,4-tetrazol-5-yl)methyl]quinolin-2-amine, 2-{methyl[4-phenyl-6-(2-phenylethyl)quinolin-2-yl]amino}acetic acid, 2-({6-[2-(3-chlorophenyl)ethyl]-4-phenylquinolin-2-yl}(methyl)amino)acetic acid, 5-{[4-phenyl-6-(2-phenylethyl)quinolin-2-yl]methyl}-1,3-thiazolidine-2,4-dione, 2-({6-[2-(4-chlorophenyl)ethyl]-4-phenylquinolin-2-yl}(methyl)amino)acetic acid, 2-[methyl({4-phenyl-6-[2-(pyridin-3-yl)ethyl]quinolin-2-yl})amino]acetic acid, 2-[methyl({4-phenyl-6-[2-(quinolin-6-yl)ethyl]quinolin-2-yl})amino]acetic acid, 2-[(6-heptyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 2-[methyl({6-[2-(2-methylphenyl)ethyl]-4-phenylquinolin-2-yl})amino]acetic acid, 2-[methyl({4-phenyl-6-[2-(pyridin-2-yl)ethyl]quinolin-2-yl})amino]acetic acid, cis-2-(6-hexyl-4-phenylquinolin-2-yl)cyclopropane-1-carboxylic acid, 1-(6-hexyl-4-phenylquinolin-2-yl)-3-methylpyrrolidine-3-carboxylic acid, 2-[methyl({4-phenyl-6-[2-(pyrimidin-2-yl)ethyl]quinolin-2-yl})amino]acetic acid, 2-[(6-hexyl-4-phenyl-5,6,7,8-tetrahydroquinolin-2-yl)(methyl)amino]acetic acid, 2-[methyl({4-phenyl-6-[2-(quinoxalin-6-yl)ethyl]quinolin-2-yl})amino]acetic acid, 5-[(6-hexyl-4-phenylquinolin-2-yl)methyl]-1,3-thiazolidine-2,4-dione, 2-({6-[(1E)-hex-1-en-1-yl]-4-phenylquinolin-2-yl}(methyl)amino)acetic acid, 2-{methyl[4-phenyl-6-(3-phenylpropyl)quinolin-2-yl]amino}acetic acid, 2-[methyl({4-phenyl-6-[2-(1,2,3,4-tetrahydroquinolin-6-yl)ethyl]quinolin-2-yl})amino]acetic acid, 2-({6-[2-(3-methoxyphenyl)ethyl]-4-phenylquinolin-2-yl}(methyl)amino)acetic acid, 2-({6-[2-(1,3-benzothiazol-2-yl)ethyl]-4-phenylquinolin-2-yl}(methyl)amino)acetic acid, 2-{[6-hexyl-4-

(pyridin-4-yl)quinolin-2-yl]oxy}propanoic acid, and 3-(6-hexyl-4-phenylquinolin-2-yl)butanoic acid.

In general, the present disclosure succeeds in conferring the following benefits and objectives.

It is an object of the present disclosure to utilize the compound according to Formula (I), (II) or (III) or a pharmaceutically acceptable salt or ester thereof to treat disorders acting on the fatty acid binding protein (FABP4).

It is an object of the present disclosure to provide a pharmaceutical composition comprising a compound according to Formula (I), (II) or (III) as an active ingredient, in combination with a pharmaceutically acceptable diluent or carrier, for use in the treatment of disorders acting on the FABP4. Here, the pharmaceutical composition can further comprise an additional therapeutically active agent.

In another aspect, there is provided a compound as defined herein for use in the prophylaxis or treatment of disorders acting on the fatty acid binding protein FABP4.

In another aspect, there is provided a pharmaceutical composition comprising a compound as defined herein as the active ingredient.

In another aspect, there is provided use of a compound as defined herein in the manufacture of a medicament for the prophylaxis or treatment of disorders acting on the fatty acid binding protein FABP4.

In another aspect, there is provided a compound as defined herein for use in therapy.

It is an object of the present disclosure to provide a method for the treatment of disorders acting on the FABP4. Such method comprises numerous process steps, such as: administering an effective amount of a compound according to Formula (I), (II) or (III) to a subject in need of such treatment (preferably, a human). The method optionally includes a process step regarding co-administration with other therapeutic agents, either as a single (or multiple) dosing, and either simultaneously or sequentially.

In another aspect, there is provided use of a compound as defined herein in the manufacture of a medicament for the inhibition of the fatty acid binding protein FABP4 in a mammal.

It is an object of the present disclosure to provide a method for inhibiting FABP4, which comprises a process step of administering an effective amount of a compound according to Formula (I), (II) or (III) to a subject in need of such treatment (preferably, a human).

It is an object of the present disclosure to provide a method to use a compound according to Formula (I), (II) or (III) for the manufacture of a medicament for use in the treatment of disorders acting on the FABP4. Examples of such disorders include type 2 diabetes, hyperglycemia, metabolic syndrome, obesity, atherosclerosis, intracranial atherosclerotic disease,

non-alcoholic steatohepatitis, asthma, multiple sclerosis, Alzheimer's disease, other chronic inflammatory and autoimmune/inflammatory diseases, chronic heart disease, polycystic ovary syndrome, preeclampsia, and cancer.

Other features and advantages of the disclosure will be apparent from the detailed description and the claims.

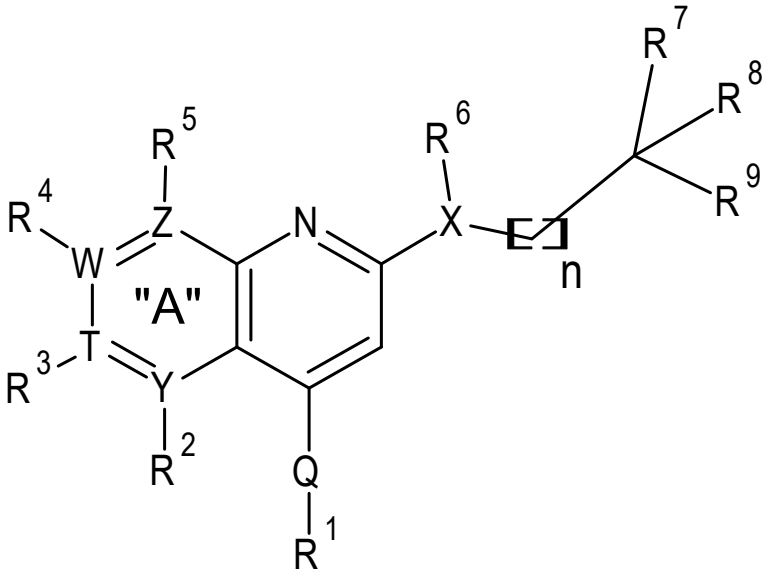
Description of the Preferred Embodiments

Reference will now be made in detail to each embodiment of the present invention. Such embodiments are provided by way of explanation of the present invention, which is not intended to be limited thereto. In fact, those of ordinary skill in the art may appreciate upon reading the present specification and viewing the present drawings that various modifications and variations can be.

CLAIMS

What is claimed is:

1. A compound of Formula I comprising:



Formula I

or pharmaceutically acceptable salts or esters thereof, wherein:

$R^1 – R^9$ are independently hydrogen, CN, COOH, $CONH_2$, $B(OR_a)_2$ (where R_a is H or alkyl), an acid isostere, halo, C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, aminoalkyl, haloalkyl, heteroaryl, cycloalkyl, or heterocycloalkyl,

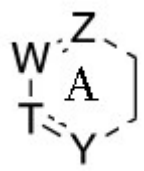
wherein any of $R^2 – R^9$ may be bonded with an adjoining R group thereby forming a fused cycloalkyl, fused heterocycloalkyl, fused aryl, or fused heteroaryl ring having from 4 to 10 carbon atoms;

wherein each of said C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, heteroaryl, cycloalkyl, or heterocycloalkyl is either unsubstituted or substituted with 1, 2, 3, 4 or 5 substituents which can be the same or different and are independently selected from the group consisting of hydrogen, deuterium, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, -$S(O)_2$-alkyl, -$S(O)_2$-aryl, -C(O)alkyl; -C_q -U-C_q, where each q is independently 0 to 10 and U is any one of aryl, heteroaryl,

cycloalkyl, heterocycloalkyl ,O, S, SO_2, or N(R_1) (R_1), wherein each R_1 is independently hydrogen, C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, heteroaryl, cycloalkyl, or heterocycloalkyl is either unsubstituted or substituted with 1, 2, 3, 4 or 5 substituents which can be the same or different and are independently selected from the group consisting of hydrogen, deuterium, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, -$S(O)_2$-alkyl, -$S(O)_2$-aryl, -C(O)alkyl;

Q is a bond or O;

X is C, N, O, or S, with the proviso that R^6 is not present if X is O or S;



wherein "A" is a saturated or unsaturated ring depicted by and Y, T, W, and Z are independently a bond, C, N, O, or alkyl or alkenyl having 1 to 4 carbon atoms; and

n is 0, 1, 2, or 3.

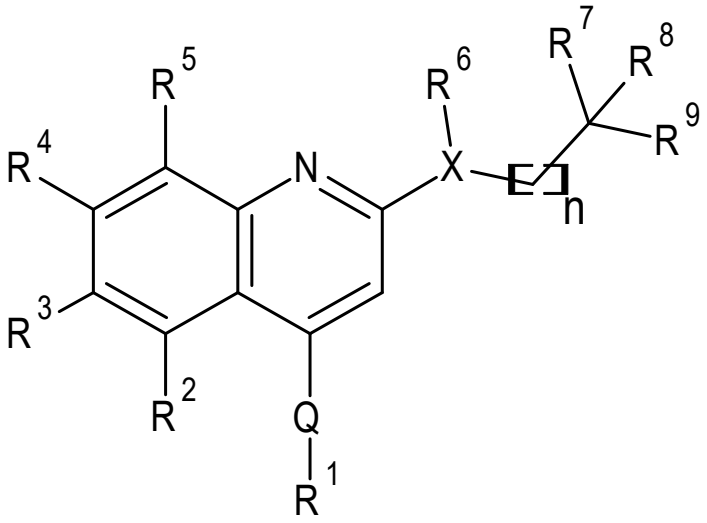
2. The compound of claim 1 wherein at least one of: R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5, R^5 and R^6 , R^7 and R^8 ,or R^8 and R^9 are bonded forming a fused heteroaryl or fused heterocycloalkyl.

3. The compound of claim 1 wherein R^3 is a C_n alkyl, and wherein the n is between 3-8.

4. The compound of claim 1 wherein R^1 is the halo.

5. The compound of claim 1 wherein Q comprises the bond.

6. A compound of Formula II comprising:



Formula II

or pharmaceutically acceptable salts or esters thereof wherein:

$R^1 – R^9$ are independently hydrogen, CN, COOH, $CONH_2$, $B(OR_a)_2$ (where R_a is H or alkyl), an acid isostere, halo, C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, aminoalkyl, haloalkyl, heteroaryl, cycloalkyl, or heterocycloalkyl,

wherein any of $R^2 – R^9$ may be bonded with an adjoining R group thereby forming a fused cycloalkyl, fused heterocycloalkyl, fused aryl, or fused heteroaryl ring having from 4 to 10 carbon atoms and wherein each of said C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, heteroaryl, cycloalkyl, or heterocycloalkyl is either unsubstituted or substituted with 1, 2, 3, 4 or 5 substituents which can be the same or different and are independently selected from the group consisting of hydrogen, deuterium, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, $-S(O)_2$-alkyl, $-S(O)_2$-aryl, -C(O)alkyl; $-C_q$ -U-C_q, where each q is independently 0 to 10 and U is any one of aryl, heteroaryl, cycloalkyl, heterocycloalkyl, O, S, SO_2, or $N(R_1)(R_1)$, wherein each R_1 is independently hydrogen, C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, heteroaryl, cycloalkyl, or heterocycloalkyl is either unsubstituted or substituted with 1, 2, 3, 4 or 5 substituents which can be the same or different and are independently selected from the group consisting of hydrogen, deuterium, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy,

aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, -$S(O)_2$-alkyl, -$S(O)_2$-aryl, -C(O)alkyl;

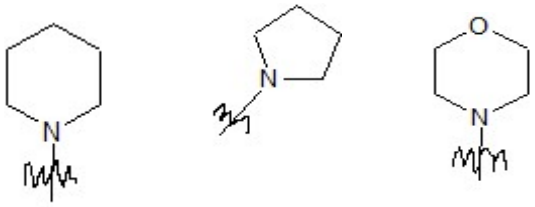
Q is a bond or O;

X is C, N, O, or S, with the proviso that R^6 is not present if X is O or S;

X is C, N, O, or S; and

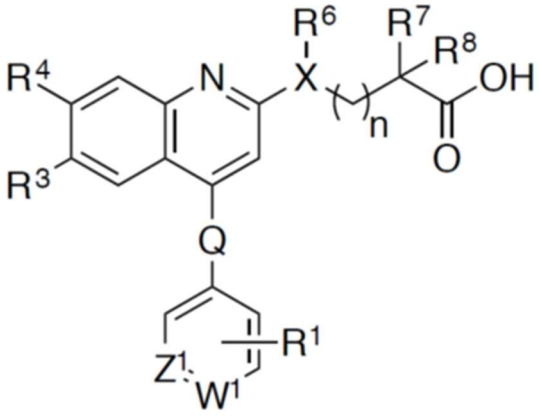
n is 0, 1, 2, or 3.

7. The compound of claim 6 wherein said heterocycloalkyl formed by bonding two of R^7, R^8 or R^9 is



, , or .

8. A compound of Formula III comprising:



Formula III

or pharmaceutically acceptable salts or esters thereof, wherein:

R^1 is cyano, alkyl, hydrogen, halo, deuterium, amino, alkoxy, aminoalkyl, (amino)alkoxy, alkenyl, alkynyl, alkoxy, hydroxy, alkylhydroxy, aryloxy, alkyl(aryl), (alkoxyalkyl)amino, aryl, aryl(halo), heteroaryl, hydroxyl-alkyl, hydroxyl-aryl, (aryl)alkyl, C(O)OH, -$S(O)_2$-alkyl, -$S(O)_2$-aryl, -C(O)alkyl, or $C(O)NH_2$;

R^3 and R^4 are independently halo or C_1-C_{10} alkyl, -C_q -U-C_q, where each q is independently 0 to 10 and U is any one of O, S, SO_2, or $N(R_1)(R_1)$, wherein each R_1 is independently hydrogen, C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, heteroaryl, cycloalkyl, or heterocycloalkyl is either unsubstituted or substituted with 1, 2, 3, 4 or 5 substituents which can be the same or different and are independently selected from the group consisting of hydrogen, deuterium, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, -$S(O)_2$-alkyl, -$S(O)_2$-aryl, -C(O)alkyl;

R^6 is independently H or alkyl;

R^7 and R^8 are independently hydrogen, deuterium, fluoro or alkyl;

wherein R^6 – R^7 may be bonded with an adjoining R group thereby forming a fused cycloalkyl, fused heterocycloalkyl, fused aryl, or fused heteroaryl ring having from 4 to 10 carbon atoms and wherein each of said C_1-C_{10} alkyl, C_1-C_{10} alkenyl, C_1-C_{10} alkynyl, aryl, heteroaryl, cycloalkyl, or heterocycloalkyl is either unsubstituted or substituted with 1, 2, 3, 4 or 5 substituents which can be the same or different and are independently selected from the group consisting of hydrogen, deuterium, halo, amino, alkoxy, cyano, aminoalkyl-, (amino)alkoxy-, -alkyl, -alkenyl, -alkynyl, alkoxy-, hydroxy, -alkylhydroxy, aryloxy-, -alkyl(aryl), (alkoxyalkyl)amino-, -aryl, -aryl(halo), -heteroaryl, hydroxyl-alkyl-, hydroxyl-aryl-, (aryl)alkyl-, -$S(O)_2$-alkyl, -$S(O)_2$-aryl, -C(O)alkyl

n is 0 or 1;

Q is a bond or O;

X is C, N, O, or S, with the proviso that R^6 is not present if X is O or S; and

Z^1 or W^1 are independently C, N, O, or S.

9. The compound of claim 8 wherein X is N.

10. The compound of claim 8 wherein R^6 is hydrogen and X is N.

11. The compound of claim 8 wherein R^3 is alkyl and R^1 is cyano.

12. The compound of claim 8 wherein X is N, and n=0.

13. The compound of claim 8 wherein X is N, and n=1.

14. The compounds of claim 8 wherein X is N, and Z^1 and W^1 are C.

15. A compound selected from the group consisting of: 3-{[6-butyl-4-(4-fluorophenyl)quinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 3-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 2-{[4-(4-fluorophenyl)-6-pentylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-hexyl-3-methyl-4-(morpholin-4-yl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-hexyl-3-methylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4,6-bis(4-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl](2-methylpropyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl](propyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl]amino}acetic acid, 2-{ethyl[4-(4-fluorophenyl)-6-hexylquinolin-2-yl]amino}acetic acid, 2-{[6-hexyl-4-(pyridin-3-yloxy)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-hexyl-4-(pyridin-4-yloxy)quinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-fluorophenoxy)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenoxy)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-octylquinolin-2-yl](2-methylpropyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-octylquinolin-2-yl](propyl)amino}acetic acid, 2-{ethyl[4-(4-fluorophenyl)-6-octylquinolin-2-yl]amino}acetic acid, 2-{methyl[6-octyl-4-(pyridin-3-yloxy)quinolin-2-yl]amino}acetic acid, 2-{methyl[6-octyl-4-(pyridin-4-yloxy)quinolin-2-yl]amino}acetic acid, 2-{[4-(3-fluorophenoxy)-6-octylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenoxy)-6-octylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-decyl-4-(4-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-heptylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(4-fluorophenyl)-6-octylquinolin-2-yl](methyl)amino}acetic acid, 2-[(6-hexylquinolin-2-yl)(methyl)amino]acetic acid, 2-{2-[(carboxymethyl)(methyl)amino]-6-hexylquinolin-4-yl}benzoic acid, 2-{[4-(4,4-difluoropiperidin-1-yl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3,3-difluoropyrrolidin-1-yl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-

hexyl-4-(morpholin-4-yl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(2-methyl-pyridin-4-yl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3,5-dimethyl-1,2-oxazol-4-yl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-cyanophenyl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 3-{[4-(3-cyanophenyl)-6-hexylquinolin-2-yl](methyl)amino}butanoic acid, 3-[(6-hexyl-4-phenylquinolin-2-yl)(methyl)amino]-2-methylpropanoic acid, 2-[methyl(6-pentanamido-4-phenylquinolin-2-yl)amino]acetic acid, 2-{methyl[6-(pentyloxy)-4-phenylquinolin-2-yl]amino}acetic acid, 2-[(7-bromo-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 2-[(7-hexyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 2-[methyl(6-octyl-4-phenylquinolin-2-yl)amino]acetic acid, 3-{[6-hexyl-4-(pyridin-3-yl)quinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 2-{[6-hexyl-4-(pyridin-3-yl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-cyanophenyl)-6-hexylquinolin-2-yl]oxy}acetic acid, 3-{[4-(3-cyanophenyl)-6-hexylquinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 2-{[4-(3-cyanophenyl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 1-[6-hexyl-4-(pyridin-3-yl)quinolin-2-yl]piperidine-3-carboxylic acid, 1-(6-hexyl-4-phenylquinolin-2-yl)piperidine-3-carboxylic acid, 2-{[6-butyl-4-(4-hydroxyphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-hydroxyphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(2-hydroxyphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(4-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(2-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(4-methylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-methylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(2-methylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(4-cyanophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(4-carbamoylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(pyridin-4-yl)quinolin-2-yl](methyl)amino}acetic acid, 6-butyl-2-(carboxymethoxy)-4-phenylquinoline-3-carboxylic acid, 2-{[6-butyl-4-(pyridin-3-yl)quinolin-2-yl](methyl)amino}acetic acid, 1-[6-butyl-4-(3-cyanophenyl)quinolin-2-yl]piperidine-3-carboxylic acid, 4-(6-butyl-4-phenylquinolin-2-yl)morpholine-2-carboxylic acid, 1-(6-butyl-4-phenylquinolin-2-yl)piperidine-3-carboxylic acid, 3-{[6-butyl-4-(3-cyanophenyl)quinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 3-{[6-butyl-4-(pyridin-3-yl)quinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 3-[(6-butyl-4-

phenylquinolin-2-yl)(methyl)amino]-2-methylpropanoic acid, 3-[(6-butyl-4-phenylquinolin-2-yl)(methyl)amino]butanoic acid, 3-[(6-butyl-4-phenylquinolin-2-yl)(methyl)amino]propanoic acid, N-(6-butyl-4-(3-cyanophenyl)quinolin-2-yl)-N-methylvaline, 2-{[4-(3-cyanophenyl)-6-pentylquinolin-2-yl]oxy}acetic acid, 2-{[4-(3-carbamoylphenyl)-6-pentylquinolin-2-yl]oxy}acetic acid, 2-{[4-(3-cyanophenyl)-6-propylquinolin-2-yl]oxy}acetic acid, 2-{[4-(3-carbamoylphenyl)-6-propylquinolin-2-yl]oxy}acetic acid, 2-{[4-(3-carbamoylphenyl)-6-ethylquinolin-2-yl]oxy}acetic acid, 2-{[6-bromo-4-(3-cyanophenyl)quinolin-2-yl]oxy}acetic acid, 2-{[6-bromo-4-(3-carbamoylphenyl)quinolin-2-yl]oxy}acetic acid, 2-{[6-butyl-4-(3-cyanophenyl)quinolin-2-yl]oxy}acetic acid, 2-{[6-butyl-4-(3-carbamoylphenyl)quinolin-2-yl]oxy}acetic acid, 2-{[4-(3-cyanophenyl)-6-pentylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-carbamoylphenyl)-6-pentylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-cyanophenyl)-6-propylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-carbamoylphenyl)-6-propylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-cyanophenyl)-6-ethylquinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-carbamoylphenyl)-6-ethylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-bromo-4-(3-cyanophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-bromo-4-(3-carbamoylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-cyanophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-carbamoylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{2-[(6-chloro-4-phenylquinolin-2-yl)(methyl)amino]acetamido}acetic acid, 2-[methyl(6-pentyl-4-phenylquinolin-2-yl)amino]acetic acid, 2-[methyl(4-phenyl-6-propylquinolin-2-yl)amino]acetic acid, 2-[(6-ethyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 1-(6-hexyl-4-phenylquinolin-2-yl)pyrrolidine-2-carboxylic acid, 6-hexyl-4-phenyl-2-(piperidin-1-yl)quinoline, 2-[(6-hexyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 1-(6-butyl-4-phenylquinolin-2-yl)pyrrolidine-2-carboxylic acid, 6-butyl-4-phenyl-2-(piperidin-1-yl)quinoline, 2-[(6-bromo-4-phenylquinolin-2-yl)oxy]acetic acid, 2-[(6-bromo-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 2-[(6-pentyl-4-phenylquinolin-2-yl)oxy]acetic acid, 2-[(4-phenyl-6-propylquinolin-2-yl)oxy]acetic acid, 2-[(6-ethyl-4-phenylquinolin-2-yl)oxy]acetic acid, 2-[(6-chloro-4-phenylquinolin-2-yl)oxy]acetic acid, 2-[(6-butyl-4-phenylquinolin-2-yl)oxy]acetic acid, 2-[(6-butyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 1-(6-chloro-4-phenylquinolin-2-yl)pyrrolidine-2-carboxylic acid, 2-[(6-chloro-4-phenylquinolin-2-

yl)(methyl)amino]propanoic acid, 2-[(6-chloro-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 6-chloro-4-phenyl-2-(piperidin-1-yl)quinoline, 3-{[6-butyl-4-(4-fluorophenyl)quinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 2-[methyl(6-octyl-4-phenylquinolin-2-yl)amino]acetic acid, 2-{[6-butyl-4-(4-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{methyl[6-octyl-4-(pyridin-3-yloxy)quinolin-2-yl]amino}acetic acid, 2-{[6-butyl-4-(3-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-[(6-hexyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 2-{[4-(4-fluorophenoxy)-6-octylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-methylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-[(6-butyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 2-{[6-decyl-4-(4-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-[methyl(4-phenyl-6-propylquinolin-2-yl)amino]acetic acid, 2-{[6-butyl-4-(4-methylphenyl)quinolin-2-yl](methyl)amino}acetic acid, 3-[(6-butyl-4-phenylquinolin-2-yl)(methyl)amino]-2-methylpropanoic acid, 2-{[4-(4-fluorophenyl)-6-pentylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(3-cyanophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-butyl-4-(2-fluorophenyl)quinolin-2-yl](methyl)amino}acetic acid, 2-{[6-hexyl-4-(pyridin-3-yloxy)quinolin-2-yl](methyl)amino}acetic acid, 2-{[4-(3-fluorophenoxy)-6-octylquinolin-2-yl](methyl)amino}acetic acid, 2-[methyl(6-pentyl-4-phenylquinolin-2-yl)amino]acetic acid, 3-[(6-hexyl-4-phenylquinolin-2-yl)(methyl)amino]-2-methylpropanoic acid, 2-{[4-(3-cyanophenyl)-6-propylquinolin-2-yl](methyl)amino}acetic acid, 2-{[6-hexyl-4-(morpholin-4-yl)quinolin-2-yl](methyl)amino}acetic acid, 3-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 2-{[4-(4-fluorophenyl)-6-hexylquinolin-2-yl](methyl)amino}acetic acid, 3-{[4-(3-cyanophenyl)-6-hexylquinolin-2-yl](methyl)amino}-2-methylpropanoic acid, 2-[methyl({6-[2-(4-methylphenyl)ethyl]-4-phenylquinolin-2-yl})amino]acetic acid, 2-[methyl({6-[2-(3-methylphenyl)ethyl]-4-phenylquinolin-2-yl})amino]acetic acid, 6-hexyl-N-methyl-4-phenyl-N-[(2H-1,2,3,4-tetrazol-5-yl)methyl]quinolin-2-amine, 2-{methyl[4-phenyl-6-(2-phenylethyl)quinolin-2-yl]amino}acetic acid, 2-({6-[2-(3-chlorophenyl)ethyl]-4-phenylquinolin-2-yl}(methyl)amino)acetic acid, 5-{[4-phenyl-6-(2-phenylethyl)quinolin-2-yl]methyl}-1,3-thiazolidine-2,4-dione, 2-({6-[2-(4-chlorophenyl)ethyl]-4-phenylquinolin-2-yl}(methyl)amino)acetic acid, 2-[methyl({4-phenyl-6-[2-(pyridin-3-yl)ethyl]quinolin-2-yl})amino]acetic acid, 2-[methyl({4-

phenyl-6-[2-(quinolin-6-yl)ethyl]quinolin-2-yl})amino]acetic acid, 2-[(6-heptyl-4-phenylquinolin-2-yl)(methyl)amino]acetic acid, 2-[methyl({6-[2-(2-methylphenyl)ethyl]-4-phenylquinolin-2-yl})amino]acetic acid, 2-[methyl({4-phenyl-6-[2-(pyridin-2-yl)ethyl]quinolin-2-yl})amino]acetic acid, cis-2-(6-hexyl-4-phenylquinolin-2-yl)cyclopropane-1-carboxylic acid, 1-(6-hexyl-4-phenylquinolin-2-yl)-3-methylpyrrolidine-3-carboxylic acid, 2-[methyl({4-phenyl-6-[2-(pyrimidin-2-yl)ethyl]quinolin-2-yl})amino]acetic acid, 2-[(6-hexyl-4-phenyl-5,6,7,8-tetrahydroquinolin-2-yl)(methyl)amino]acetic acid, 2-[methyl({4-phenyl-6-[2-(quinoxalin-6-yl)ethyl]quinolin-2-yl})amino]acetic acid, 5-[(6-hexyl-4-phenylquinolin-2-yl)methyl]-1,3-thiazolidine-2,4-dione, 2-({6-[(1E)-hex-1-en-1-yl]-4-phenylquinolin-2-yl}(methyl)amino)acetic acid, 2-{methyl[4-phenyl-6-(3-phenylpropyl)quinolin-2-yl]amino}acetic acid, 2-[methyl({4-phenyl-6-[2-(1,2,3,4-tetrahydroquinolin-6-yl)ethyl]quinolin-2-yl})amino]acetic acid, 2-({6-[2-(3-methoxyphenyl)ethyl]-4-phenylquinolin-2-yl}(methyl)amino)acetic acid, 2-({6-[2-(1,3-benzothiazol-2-yl)ethyl]-4-phenylquinolin-2-yl}(methyl)amino)acetic acid, 2-{[6-hexyl-4-(pyridin-4-yl)quinolin-2-yl]oxy}propanoic acid, and 3-(6-hexyl-4-phenylquinolin-2-yl)butanoic acid.

16. Use of a compound of claim 1 in the manufacture of a medicament for the inhibition of the fatty acid binding protein FABP4 in a mammal.

17. The use according to claim 16, wherein the subject is a human.

18. The compound according to claim 1 for use in the prophylaxis or treatment of disorders acting on the fatty acid binding protein FABP4.

19. The compound for use according to claim 18, wherein the disorders are selected from type 2 diabetes, hyperglycemia, metabolic syndrome, obesity, atherosclerosis, intracranial atherosclerotic disease, non-alcoholic steatohepatitis, asthma, multiple sclerosis, Alzheimer's disease, other chronic inflammatory and autoimmune/inflammatory diseases, chronic heart disease, polycystic ovary syndrome, preeclampsia, and cancer.

20. A pharmaceutical composition comprising a compound according to claim 1 as the active ingredient.

21. The pharmaceutical composition according claim 20, further comprising at least one additional active ingredient or a pharmaceutically acceptable carrier.

22. Use of a compound according to claim 1 in the manufacture of a medicament for the prophylaxis or treatment of disorders acting on the fatty acid binding protein FABP4.

23. The use according to claim 22, wherein the subject is a human.

24. A compound of claim 1 for use in therapy.