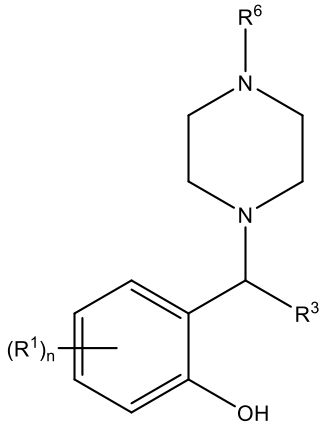
CLAIMS

1. A compound of general formula (IB):



(IB)

wherein:

each R^1 is independently halo, $NR^{10}R^{11}$, C_{1-6} alkyl, C_{1-6} haloalkyl, -O(C_{1-6} alkyl), -O(C_{1-6} haloalkyl), aryl, heteroaryl, -O-aryl or -O-heteroaryl,

wherein

each R^{10} and R^{11} is independently selected from H or C_{1-6} alkyl;

aryl or heteroaryl groups R^1 are optionally substituted with one or more substituents selected from halo, OH, cyano, nitro, $-NR^4R^5$, $-S(O)_pNR^4R^5$, $-C(O)NR^4R^5$, $-C_{1-6}$ alkyl, or -O(C_{1-6} alkyl), wherein either of the $-C_{1-6}$ alkyl, or -O(C_{1-6} alkyl) groups are optionally substituted with one or more substituents selected from OH, halo, arylO(C_{1-6} alkyl), or O(C_{1-6} haloalkyl);

p is 1 or 2;

each R^4 and R^5 is independently selected from H or C_{1-4} alkyl or R^4 and R^5 together with a nitrogen atom to which they are attached may form a 3-8-membered heterocyclic ring, optionally containing one or more additional heteroatoms selected from O, N and S;

n is 0, 1, 2, 3, or 4;

R^6 is selected from aryl substituted with one or more substituents selected from halo, C_{1-4} alkyl, C_{1-4} haloalkyl, -O(C_{1-4} alkyl) and -O(C_{1-4} haloalkyl); heteroaryl selected from indolyl, isoindolyl, benzoxazolyl and benzisoxazolyl and optionally substituted with one or more substituents selected from halo, C_{1-4} alkyl, C_{1-4} haloalkyl, -O(C_{1-4} alkyl) and -O(C_{1-4}

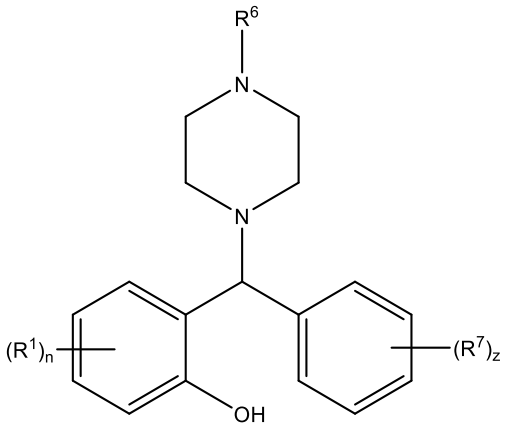
haloalkyl); -O-aryl substituted with one or more substituents selected from halo, C_{1-4} alkyl, C_{1-4} haloalkyl, -O(C_{1-4} alkyl) and -O(C_{1-4} haloalkyl); -O-heteroaryl selected from indolyl, isoindolyl, benzoxazolyl and benzisoxazolyl and optionally substituted with one or more substituents selected from halo, C_{1-4} alkyl, C_{1-4} haloalkyl, -O(C_{1-4} alkyl) and -O(C_{1-4} haloalkyl); and C_{1-4} alkyl substituted with two aryl or two heteroaryl groups, wherein at least one of the aryl and heteroaryl groups is substituted with one or more substituents selected from halo, C_{1-4} alkyl, C_{1-4} haloalkyl, -O(C_{1-4} alkyl) and -O(C_{1-4} haloalkyl);

R^3 is aryl or heteroaryl any of which is optionally substituted with one or more substituents R^7 selected from halo, -C_{1-4} alkyl optionally substituted with aryl, -O(C_{1-4} alkyl) optionally substituted with aryl, -C_{1-4} haloalkyl, -O(C_{1-4} haloalkyl) or -C(O)NR^8R^9;

each R^8 and R^9 is independently selected from H, C_{1-4} alkyl or C_{3-6} cycloalkyl or R^8 and R^9 together with the nitrogen atom to which they are attached may form a 5- or 6-membered heterocyclic ring, optionally containing one or more additional heteroatoms selected from O, N and S;

or a pharmaceutically acceptable salt, solvate or hydrate thereof or a deuterated or tritiated variant thereof, including all stereoisomers.

2. A compound according to claim 1, wherein R^3 is phenyl optionally substituted with one or more substituents R^7 such that the compound of general formula (IB) is a compound of general formula (ID):



(ID)

wherein z is 0 to 5

or a pharmaceutically acceptable salt, solvate or hydrate thereof or a deuterated or tritiated variant thereof, including all stereoisomers.

3. A compound according to claim 1, wherein n is 0.

4. A compound according to claim 1, wherein n is other than 0 and R^1 is halo or an aryl or heteroaryl group optionally substituted as defined in claim 1.

5. A compound according to claim 4, wherein R^1 is an aryl or heteroaryl group optionally substituted with halo, OH, cyano, nitro, $-SO_2NH_2$, $-C(O)NR^4R^5$, $-C_{1-4}$ alkyl optionally substituted with aryl, $-C_{1-4}$ haloalkyl, $-O(C_{1-4}$ alkyl) optionally substituted with aryl or $-O(C_{1-4}$ haloalkyl), where R^4 and R^5 together with the nitrogen atom to which they are attached form a piperidine or pyrrolidine ring.

6. A compound according to claim 5, wherein R^1 is an aryl or heteroaryl group optionally substituted with chloro, fluoro, methyl, ethyl, trifluoromethyl, benzyl, methoxy, ethoxy, benzyloxy, trifluoromethoxy or piperidine-1-carbonyl.

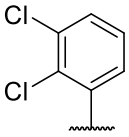
7. A compound according to claim 1, wherein R^3 is heteroaryl optionally substituted with one or more substituents R^7 selected from halo, $-C_{1-4}$ alkyl optionally substituted with aryl, $-O(C_{1-4}$ alkyl) optionally substituted with aryl, $-C_{1-4}$ haloalkyl, $-O(C_{1-4}$ haloalkyl) or $-C(O)NR^8R^9$; wherein each R^8 and R^9 is independently selected from H, C_{1-4} alkyl or C_{3-6} cycloalkyl or R^8 and R^9 together with the nitrogen atom to which they are attached may form a 5- or 6-membered heterocyclic ring, optionally containing one or more additional heteroatoms selected from O, N and S.

8. A compound according to claim 1 wherein each R^1 is independently halo, C_{1-6} alkyl, C_{1-6} haloalkyl, aryl or heteroaryl, wherein aryl or heteroaryl groups are optionally substituted with one or more substituents selected from halo, OH, cyano, nitro, $-S(O)_pNR^4R^5$, $-C(O)NR^4R^5$, $-C_{1-6}$ alkyl optionally substituted with aryl, $-C_{1-6}$ haloalkyl, $-O(C_{1-6}$ alkyl) optionally substituted with aryl or $-O(C_{1-6}$ haloalkyl);

p is 0, 1 or 2;

each R^4 and R^5 is independently selected from H or C_{1-4} alkyl or R^4 and R^5 together with the nitrogen atom to which they are attached may form a 5- or 6-membered heterocyclic ring, optionally containing one or more additional heteroatoms selected from O, N and S.

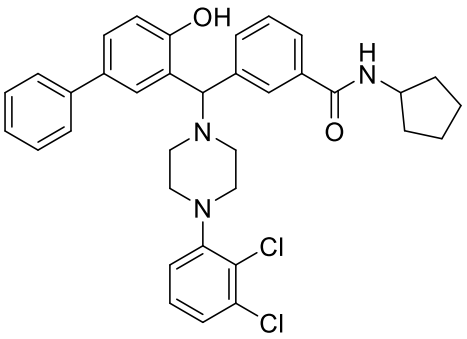
9. A compound according to claim 1, wherein R^6 is phenyl, -O-phenyl, -CH(phenyl)$_2$, or –CH(heteroaryl)$_2$, where the heteroaryl group is selected from pyridinyl, indolyl, isoindolyl, benzoxazolyl and benzisoxazolyl, and wherein any of the above R^6 groups may be substituted as defined in claim 1.

10. A compound according to claim 1, wherein R^6 is  .

11. A compound according to claim 2, wherein z is 0, 1 or 2; R^7 is absent or R^7 is halo, -C_{1-4} alkyl, benzyl, -O(C_{1-4} alkyl), benzyloxy, -C_{1-4} haloalkyl, -O(C_{1-4} haloalkyl) or -C(O)NR^8R^9, where R^8 and R^9 together with the nitrogen atom to which they are attached form a piperidinyl ring or wherein R^8 is H and R^9 is C_{3-6} cycloalkyl.

12. A compound according to claim 2, wherein z is 1, R^7 is C(O)NR^8R^9, R^8 is H and R^9 is C_{3-6} cycloalkyl.

13. A compound of claim 12 selected from the group consisting of: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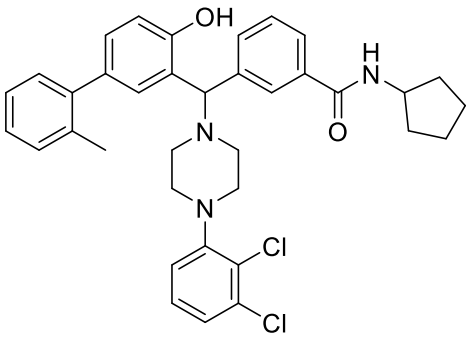
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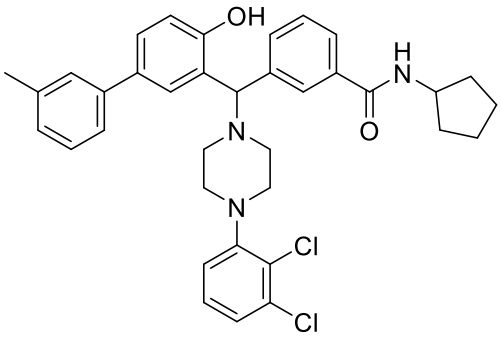
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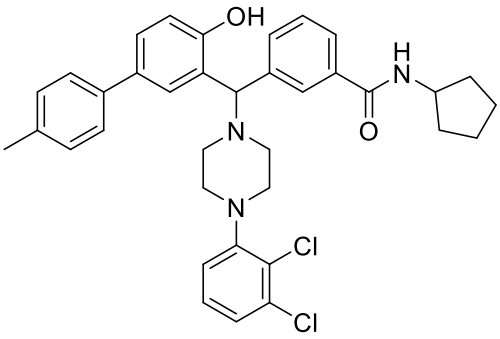
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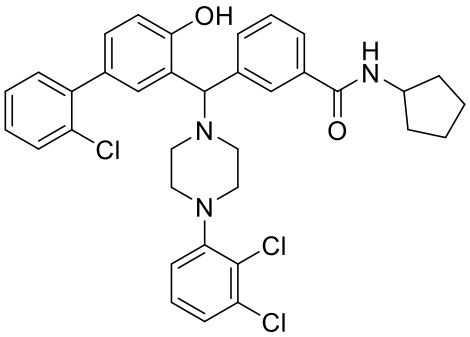
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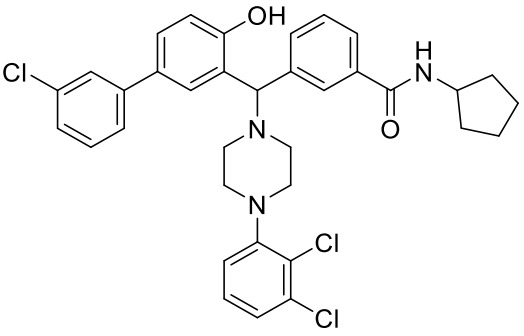
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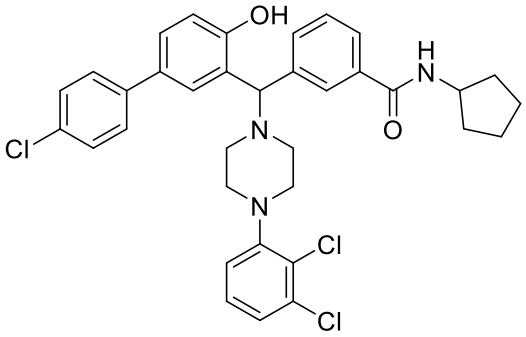
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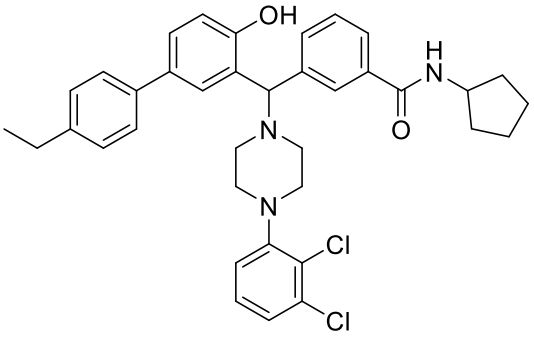
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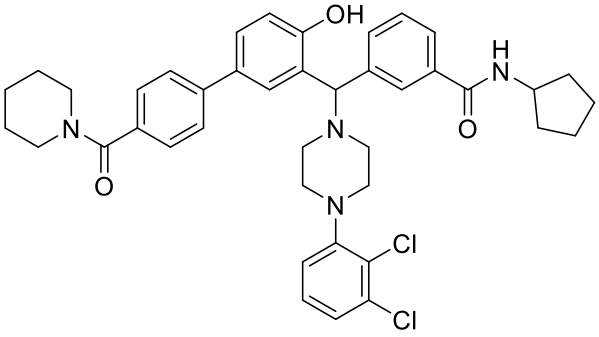
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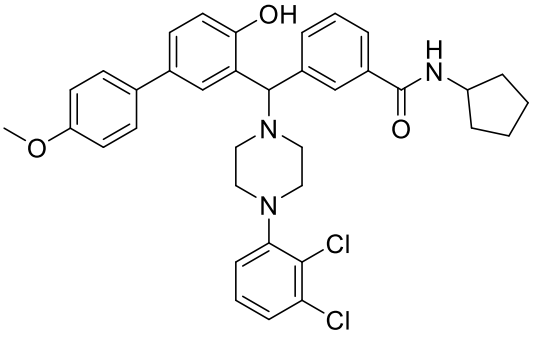
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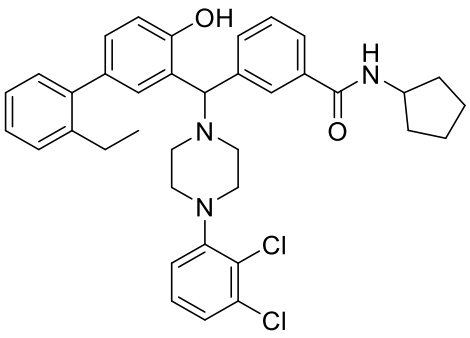
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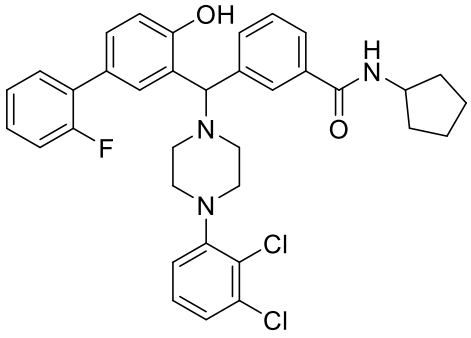
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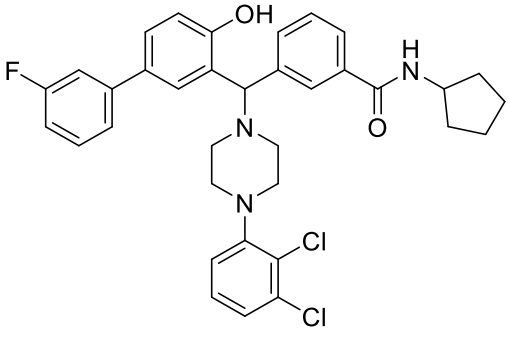
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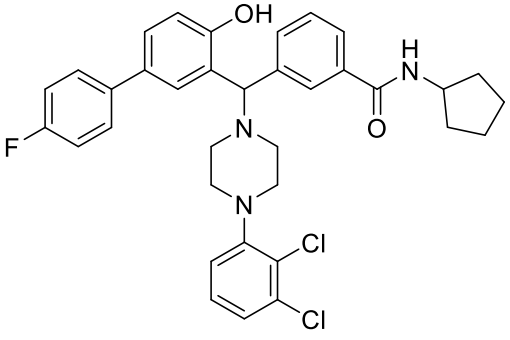
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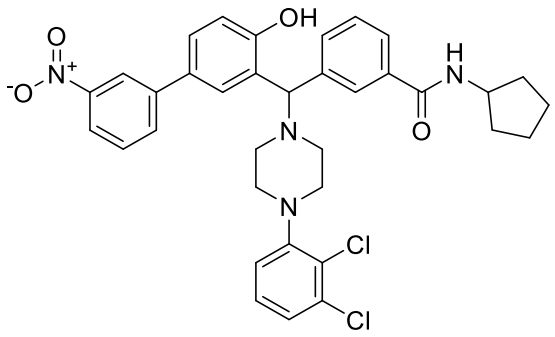
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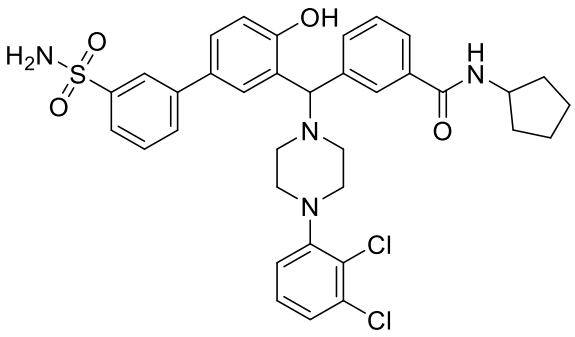
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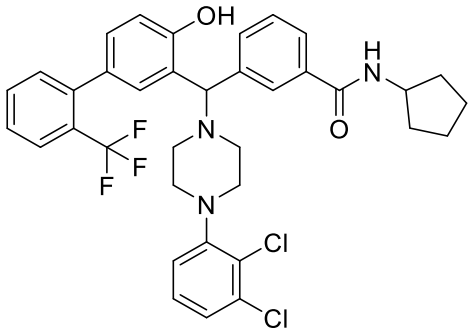
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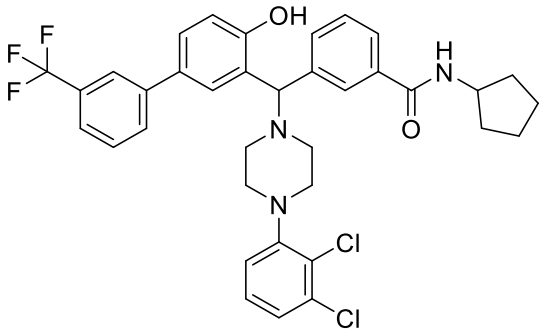
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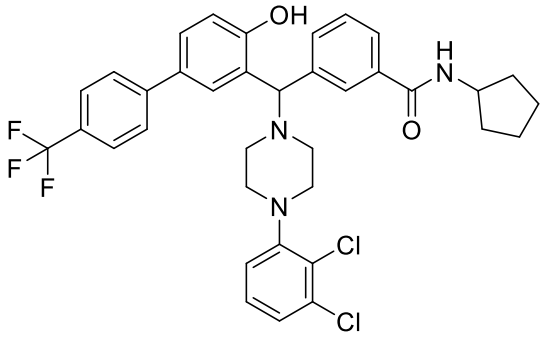
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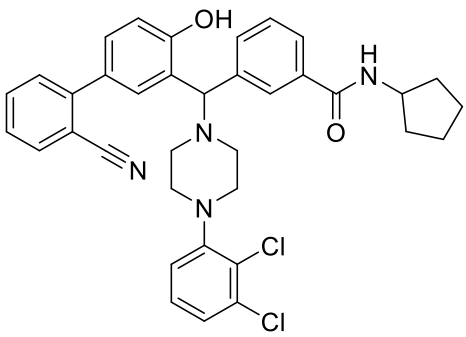
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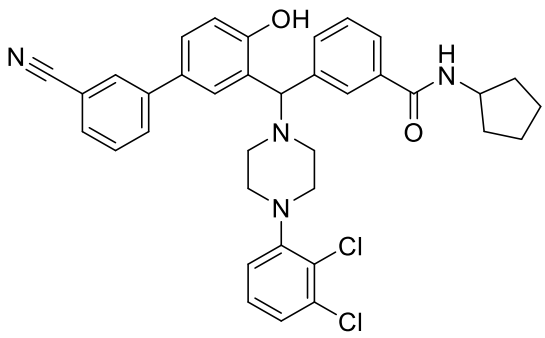
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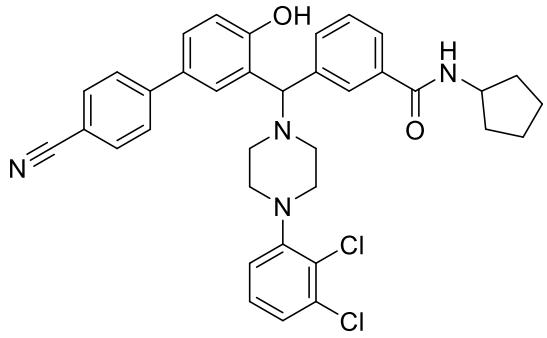
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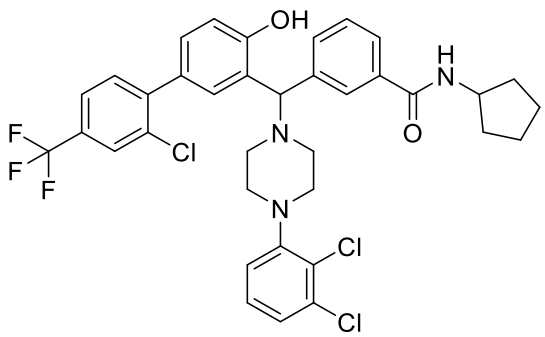

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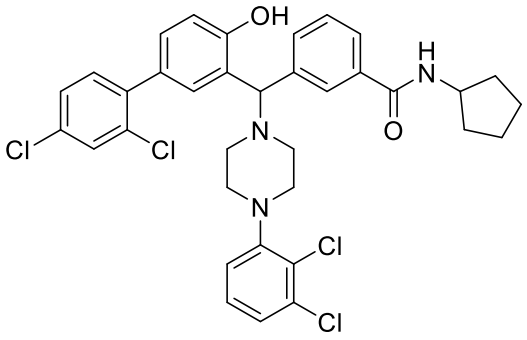

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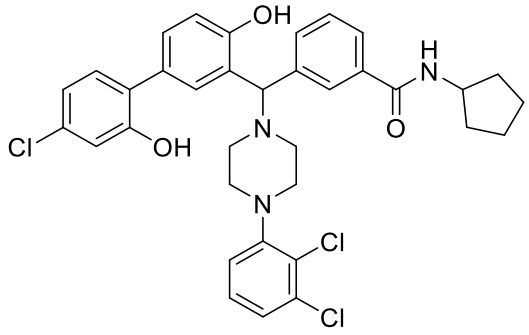

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or a pharmaceutically acceptable salt, solvate or hydrate thereof or a deuterated or tritiated variant thereof, including all stereoisomers.

14. A compound selected from:

2-((2-chlorophenyl)(4-(4-methoxyphenyl)piperazin-1-yl)methyl)phenol (Compound 1);

2-((4-chlorophenyl)(4-(4-methoxyphenyl)piperazin-1-yl)methyl)phenol (Compound 2);

2-((4-(benzyloxy)-3-fluorophenyl)(4-(4-methoxyphenyl)piperazin-1-yl)methyl)phenol (Compound 3);

(4-((2-hydroxyphenyl)(4-(4-Methoxyphenyl)piperazinyl)methyl)phenyl)(piperidin-1-yl)methanone (Compound 4);

3-((5-chloro-2-hydroxyphenyl)(4-(4-methoxyphenyl)piperazin-1-yl)methyl)-N-cyclopentylbenzamide (Compound 5);

2-((4-(benzyloxy)-3-fluorophenyl)(4-(4-methoxyphenyl)piperazin-1-yl)methyl)-4-chlorophenol (Compound 6);

2-((4-(2, 3-dichlorophenyl)piperazin-1-yl)(o-tolyl)methyl)phenol (Compound 8);

N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(2-hydroxyphenyl)methyl) benzamide (Compound 9, NPB);

2-((4-(benzyloxy)-3-fluorophenyl)(4-(2,3-dichlorophenyl)piperazin-1-yl)methyl)phenol (Compound 10);

2-((4-((4-chlorophenyl)(phenyl)methyl)piperazin-1-yl)(phenyl)methyl)phenol (Compound

11);
2-((4-((4-chlorophenyl)(phenyl)methyl)piperazin-1-yl)(p-tolyl)methyl)phenol (Compound 12);
2-((4-chlorophenyl)(4-((4-chlorophenyl)(phenyl)methyl)piperazin-1-yl)methyl)phenol (Compound 13);
2-((4-((4-chlorophenyl)(phenyl)methyl)piperazin-1-yl)(4-ethylphenyl)methyl)phenol (Compound 14);
(4-((4-((4-chlorophenyl)(phenyl)methyl)piperazin-1-yl)(2-hydroxyphenyl)methyl)phenyl)(piperidin-1-yl)methanone (Compound 15);
N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4-hydroxy-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 16);
N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4-hydroxy-2'-methyl-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 17);
N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4-hydroxy-3'-methyl-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 18);
N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4-hydroxy-4'-methyl-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 19);
3-((2'-chloro-4-hydroxy-[1,1'-biphenyl]-3-yl)(4-(2,3-dichlorophenyl)piperazin-1-yl)methyl)-N-cyclopentylbenzamide (Compound 20);
3-((3'-chloro-4-hydroxy-[1,1'-biphenyl]-3-yl)(4-(2,3-dichlorophenyl)piperazin-1-yl)methyl)-N-cyclopentylbenzamide (Compound 21);
3-((4'-chloro-4-hydroxy-[1,1'-biphenyl]-3-yl)(4-(2,3-dichlorophenyl)piperazin-1-yl)methyl)-N-cyclopentylbenzamide (Compound 22);
N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4'-ethyl-4-hydroxy-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 23);
N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4-hydroxy-4'-(piperidine-1-carbonyl)-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 24);
N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4-hydroxy-4'-methoxy-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 25);
N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(2'-ethyl-4-hydroxy-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 26);
N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(2'-fluoro-4-hydroxy-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 27);
N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(3'-fluoro-4-hydroxy-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 28);
N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4'-fluoro-4-hydroxy-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 29);

N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4-hydroxy-3'-nitro-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 30);

N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4-hydroxy-3'-sulfamoyl-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 31);

N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4-hydroxy-2'-(trifluoromethyl)-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 32);

N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4-hydroxy-3'-(trifluoromethyl)-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 33);

N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4-hydroxy-4'-(trifluoromethyl)-[1,1'-biphenyl]-3-yl)methyl)benzamide (Compound 34);

3-((2'-cyano-4-hydroxy-[1,1'-biphenyl]-3-yl)(4-(2,3-dichlorophenyl)piperazin-1-yl)methyl)-N-cyclopentylbenzamide (Compound 35);

3-((3'-cyano-4-hydroxy-[1,1'-biphenyl]-3-yl)(4-(2,3-dichlorophenyl)piperazin-1-yl)methyl)-N-cyclopentylbenzamide (Compound 36)

3-((4'-cyano-4-hydroxy-[1,1'-biphenyl]-3-yl)(4-(2,3-dichlorophenyl)piperazin-1-yl)methyl)-N-cyclopentylbenzamide (Compound 37);

3-((2'-chloro-4-hydroxy-4'-(trifluoromethyl)-[1,1'-biphenyl]-3-yl)(4-(2,3-dichlorophenyl) piperazin-1-yl)methyl)-N-cyclopentylbenzamide (Compound 38);

N-cyclopentyl-3-((2',4'-dichloro-4-hydroxy-[1,1'-biphenyl]-3-yl)(4-(2,3-dichlorophenyl) piperazin-1-yl)methyl)benzamide (Compound 39);

3-((4'-chloro-2',4-dihydroxy-[1,1'-biphenyl]-3-yl)(4-(2,3-dichlorophenyl)piperazin-1-yl)methyl)-N-cyclopentylbenzamide (Compound 40);

3-((4-(4-chlorophenyl)piperazin-1-yl)(2-hydroxyphenyl)methyl)-N-cyclopentylbenzamide (Compound 41, NCK1)

2-((4-chlorophenyl)(4-(2,3-dichlorophenyl)piperazin-1-yl)methyl)phenol (Compound 42, NCK2)

2-((4-(2,3-dichlorophenyl)piperazin-1-yl)(3-methoxyphenyl)methyl)phenol (Compound 43, NCK3)

1-(5-((4-(2,3-dichlorophenyl)piperazin-1-yl)(2-hydroxyphenyl)methyl)thiophen-2-yl)ethanone (Compound 44, NCK4)

2-((4-(2,3-dichlorophenyl)piperazin-1-yl)(naphthalen-1-yl)methyl)phenol (Compound 45, NCK5)

5-((4-(2,3-dichlorophenyl)piperazin-1-yl)(2-hydroxyphenyl)methyl)furan-2-carbaldehyde (Compound 46, NCK6)

2-((4-(2,3-dichlorophenyl)piperazin-1-yl)(2-fluoro-3-methylpyridin-4-yl)methyl)phenol (Compound 47, NCK7)

2-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4-(trifluoromethyl)phenyl)methyl)phenol

(Compound 48, NCK8)
2-((6-chloro-5-methylpyridin-3-yl)(4-(2,3-dichlorophenyl)piperazin-1-yl)methyl)phenol (Compound 49, NCK9)
2-((4-(2,3-dichlorophenyl)piperazin-1-yl)(pyridin-3-yl)methyl)phenol (Compound 50, NCK10)
1-(5-((4-(4-chlorophenyl)piperazin-1-yl)(2-hydroxyphenyl)methyl)thiophen-2-yl)ethanone (Compound 51, NCK14)
3-((4-(4-chlorophenyl)piperazin-1-yl)(4-(diethylamino)-2-hydroxyphenyl)methyl)-N-cyclopentylbenzamide(Compound 52, NCK16)
N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(4-(diethylamino)-2-hydroxyphenyl)methyl)benzamide (Compound 53, NCK18)
N-cyclopentyl-3-((4-(2,3-dichlorophenyl)piperazin-1-yl)(2-hydroxy-4,6-dimethoxyphenyl)methyl)benzamide (Compound 54, NCK19)
2-((4-chlorophenyl)(4-(4-chlorophenyl)piperazin-1-yl)methyl)phenol (Compound 55, NCK20)
2-((4-(4-chlorophenyl)piperazin-1-yl)(6-methylpyridin-3-yl)methyl)phenol (Compound 56, NCK21)
2-(o-tolyl(4-(p-tolyl)piperazin-1-yl)methyl)phenol (Compound 57, SG1)
2-((4-(p-tolyl)piperazin-1-yl)(4-(trifluoromethyl)phenyl)methyl)phenol (Compound 58, SG2)
N-cyclopentyl-4-((2-hydroxyphenyl)(4-(p-tolyl)piperazin-1-yl)methyl)benzamide (Compound 59, SG3)
2-((4-chlorophenyl)(4-(p-tolyl)piperazin-1-yl)methyl)phenol (Compound 60, SG4)
2-((3-methoxyphenyl)(4-(p-tolyl)piperazin-1-yl)methyl)phenol (Compound 61, SG5)
5-((2-hydroxyphenyl)(4-(p-tolyl)piperazin-1-yl)methyl)furan-2-carbaldehyde (Compound 62, SG6)
2-((6-methylpyridin-3-yl)(4-(p-tolyl)piperazin-1-yl)methyl)phenol (Compound 63, SG7);
or a pharmaceutically acceptable salt, solvate or hydrate thereof or a deuterated or tritiated variant thereof, including all stereoisomers.

15. A pharmaceutical composition comprising a compound according to claim 1 and a pharmaceutically acceptable excipient.

16. A pharmaceutical composition according to claim 15 which is formulated for intraperitoneal administration, hepatoportal administration, intravenous administration, intra articular administration, pancreatic duodenal artery administration, intramuscular administration, or any combination thereof.