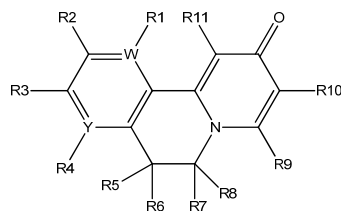


What is claimed is:

1. A compound of Formula I



Formula I

wherein

W and Y are independently C or N, with the proviso that W and Y are not both C;

wherein

if W is C, then R¹ is hydrogen, hydroxy, halogen, cyano, amino or substituted amino, thio or substituted thio, alkyl or substituted alkyl, alkoxy or substituted alkoxy; cycloalkyl or substituted cycloalkyl; alkenyl or substituted alkenyl; 3- to 8-membered heterocycloalkyl or substituted 3- to 8-membered heterocycloalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl, pyrrolidinyl, -C_xH_{2x}-phenyl, -O-C_xH_{2x}-phenyl, or -(C₁₋₆alkyl)N-C_xH_{2x}-phenyl wherein x is 0, 1, 2, 3, 4, 5, 6; or -OR¹²; and

if Y is C, then R⁴ is hydrogen, hydroxy, halogen, cyano, amino or substituted amino, thio or substituted thio, alkyl or substituted alkyl, alkoxy or substituted alkoxy; cycloalkyl or substituted cycloalkyl; alkenyl or substituted alkenyl; 3- to 8-membered heterocycloalkyl or substituted 3- to 8-membered heterocycloalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl, pyrrolidinyl, -C_xH_{2x}-phenyl, -O-C_xH_{2x}-phenyl, or -(C₁₋₆alkyl)N-C_xH_{2x}-phenyl wherein x is 0, 1, 2, 3, 4, 5, 6; or -OR¹²;

wherein

if W is N, then R¹ is absent; and

if Y is N, then R⁴ is absent;

R² and R³ are independently selected from hydrogen, hydroxy, halogen, cyano, amino or substituted amino, thio or substituted thio, alkyl or substituted alkyl, alkoxy or substituted alkoxy; cycloalkyl or substituted cycloalkyl; alkenyl or substituted alkenyl; 3- to 8-membered heterocycloalkyl or substituted 3- to 8-membered heterocycloalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl, pyrrolidinyl, -C_xH_{2x}-phenyl, -O-C_xH_{2x}-phenyl, or -(C₁₋₆alkyl)N-C_xH_{2x}-phenyl wherein x is 0, 1, 2, 3, 4, 5, 6; or -OR¹²;

R⁵ and R⁶ are independently hydrogen, hydroxy, halogen, cyano, amino, alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, alkenyl or

substituted alkenyl; aryl or substituted aryl, heteroaryl or substituted aryl, $-C_xH_{2x}$ -phenyl or $-O-C_xH_{2x}$ -phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6;

R^7 and R^8 are independently hydrogen, hydroxy, halogen, cyano, amino, alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, alkenyl or substituted alkenyl; aryl or substituted aryl, heteroaryl, $-C_xH_{2x}$ -phenyl or $-O-C_xH_{2x}$ -phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6;

or R^5 and R^6 together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR^{22} , S, SR^{22} or $SR^{22}R^{22i}$, wherein the 3- to 8-membered heterocycloalkyl ring is optionally substituted with R^{13} , $R^{13'}$, R^{14} and/or $R^{14'}$;

or R^6 and R^7 together form a 3- to 8-membered cycloalkyl ring or heterocycloalkyl ring comprising one heteroatom or two or more heteroatoms, optionally substituted with R^{15} , $R^{15'}$, R^{16} and/or $R^{16'}$, wherein the one heteroatom in the heteroalkyl ring is NR^{20} and the two or more heteroatoms are selected from N, NR^{22} , O, S, SR^{22} and $SR^{22}R^{22i}$;

or R^7 and R^8 together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, optionally substituted with R^{17} , $R^{17'}$, R^{18} and/or $R^{18'}$, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR^{22} , S, SR^{22} or $SR^{22}R^{22i}$;

R^9 is a bond, hydrogen, hydroxy, halogen, cyano, amino, alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, alkenyl or substituted alkenyl, heterocycloalkyl or substituted heterocycloalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl, $-C_xH_{2x}$ -phenyl or $-O-C_xH_{2x}$ -phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6;

R^{10} is a substituent shown in Table 2 or a tautomer thereof;

or R^9 is a bond and R^9 and R^{10} together form an oxaborole ring;

R^{11} is hydrogen, hydroxy, halogen, cyano, amino, alkyl or substituted alkyl; alkenyl or substituted alkenyl; alkoxy or substituted alkoxy; cycloalkyl or substituted cycloalkyl; heterocycloalkyl or substituted heterocycloalkyl, aryl, heteroaryl, $-C_xH_{2x}$ -phenyl or $-O-C_xH_{2x}$ -phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6;

R^{12} is hydrogen; alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, heterocycloalkyl or substituted heterocycloalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl;

R^{13} , $R^{13'}$, R^{14} and $R^{14'}$ are independently hydrogen, hydroxy, halogen, amino, aminoalkyl, cyano, C_{1-6} alkyl, C_{1-6} alkoxy, carbonyl, carboxamide, amide; or R^{13} and $R^{13'}$ or R^{14} and $R^{14'}$ together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, optionally substituted with oxygen, halogen, hydroxy, amino, cyano, C_{1-6} alkyl, C_{3-8} cycloalkyl, C_{2-6} alkenyl or C_{1-6} alkoxy, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR^{22} , S, SR^{22} or $SR^{22}R^{22i}$;

R¹⁵, R^{15'}, R¹⁶ and R^{16'} are independently hydrogen, hydroxy, halogen, amino, cyano, C₁₋₆alkyl, or C₁₋₆alkoxy; or R¹⁵ and R^{15'} or R¹⁶ and R^{16'} together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring optionally substituted with oxygen, halogen, hydroxy, amino, cyano, C₁₋₆alkyl, C₃₋₈cycloalkyl, C₂₋₆alkenyl or C₁₋₆alkoxy, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR²², S, SR²² or SR²²R²²ⁱ;

R¹⁷, R¹⁷ⁱ, R¹⁸ and R^{18'} are independently hydrogen, hydroxy, halogen, amino, cyano, C₁₋₆alkyl, or C₁₋₆alkoxy; or R¹⁷ and R¹⁸ or R¹⁷ⁱ and R^{18'} together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, optionally substituted with oxygen, halogen, hydroxy, amino, cyano, C₁₋₆alkyl, C₃₋₈cycloalkyl, C₂₋₆alkenyl or C₁₋₆alkoxy, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR²², S, SR²² or SR²²R²²ⁱ;

R¹⁹, R^{19'} and R^{19''} are independently hydrogen, C₁₋₆alkyl, C₃₋₈cycloalkyl, C₂₋₆alkenyl, C₁₋₆alkoxy, phenyl, C₁₋₆alkylimidazole, C₁₋₆alkyltriazole, C₁₋₆alkyltetrazole, C₁₋₆alkylthiazole, C₁₋₆alkyloxazole, C₁₋₆alkyldioxazole; C₁₋₆alkyloxazolidone; and

R²⁰ and R²¹ are independently hydrogen, C₁₋₆alkyl, C₃₋₈cycloalkyl, C₂₋₆alkenyl, C₁₋₆alkoxy, phenyl, C₁₋₆alkylimidazole, C₁₋₆alkyltriazole, C₁₋₆alkyltetrazole, C₁₋₆alkylthiazole, C₁₋₆alkyloxazole, C₁₋₆alkyldioxazole; C₁₋₆alkyloxazolidone, or R²⁰ and R²¹ together with the nitrogen to which they are attached form unsubstituted pyrrolidinyl, unsubstituted piperidinyl, or unsubstituted morpholinyl; or form carboxyl-substituted pyrrolidinyl, carboxyl-substituted piperidinyl or carboxyl-substituted morpholinyl; and

R²² and R^{22'} are independently selected from hydrogen, oxygen, C₁₋₆alkyl or substituted C₁₋₆alkyl, C₁₋₆alkoxy or substituted C₁₋₆alkoxy, C₃₋₈cycloalkyl or substituted C₃₋₈cycloalkyl, C₂₋₆alkenyl or substituted C₂₋₆alkenyl, aryl or substituted aryl, including substituted or unsubstituted C₁₋₆alkylimidazole, substituted or unsubstituted C₁₋₆alkyltriazole, C₁₋₆alkyltetrazole, C₁₋₆alkylthiazole, substituted or unsubstituted C₁₋₆alkyloxazole, C₁₋₆alkyldioxazole; C₁₋₆alkyloxazolidone; -COR¹⁹, -COOR^{19'}, -CSOR^{19''}, -CONR²⁰R²¹,

or a pharmaceutically acceptable salt thereof.

2. The compound of Formula I or pharmaceutically acceptable salt thereof according to claim 1,

wherein

R⁵ and R⁶ together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR²², S, SR²² or SR²²R²²ⁱ, wherein the 3- to 8-membered heterocycloalkyl ring is optionally substituted with R¹³, R^{13'}, R¹⁴ and/or R^{14'}.

3. The compound of Formula I or pharmaceutically acceptable salt thereof according to claim 1,

wherein

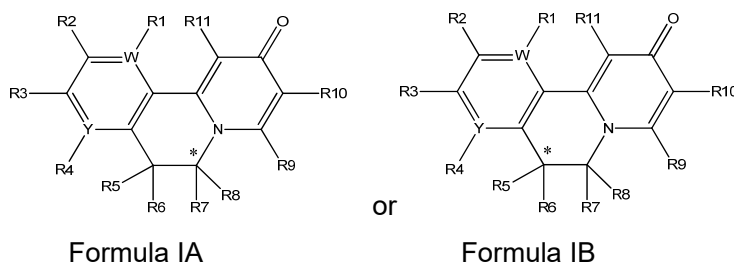
R^6 and R^7 together form a 3- to 8-membered cycloalkyl ring or heterocycloalkyl ring comprising one heteroatom or two or more heteroatoms, optionally substituted with R^{15} , $R^{15'}$, R^{16} and/or $R^{16'}$, wherein the one heteroatom in the heteroalkyl ring is NR^{20} and the two or more heteroatoms are selected from N, NR^{22} , O, S, SR^{22} and $SR^{22}R^{22'}$.

4. The compound of Formula I or pharmaceutically acceptable salt thereof according to claim 1,

wherein

R^7 and R^8 together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, optionally substituted with R^{17} , $R^{17'}$, R^{18} and/or $R^{18'}$, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR^{22} , S, SR^{22} or $SR^{22}R^{22'}$.

5. A compound of Formula IA or Formula IB:



wherein C* is a carbon atom stereocenter which has a configuration which is (R) or (S); W and Y are independently C or N, with the proviso that W and Y are not both C;

wherein

if W is C, then R^1 is hydrogen, hydroxy, halogen, cyano, amino or substituted amino, thio or substituted thio, alkyl or substituted alkyl, alkoxy or substituted alkoxy; cycloalkyl or substituted cycloalkyl; alkenyl or substituted alkenyl; 3- to 8-membered heterocycloalkyl or substituted 3- to 8-membered heterocycloalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl, pyrrolidinyl, $-C_xH_{2x}$ -phenyl, $-O-C_xH_{2x}$ -phenyl, or $-(C_{1-6}alkyl)N-C_xH_{2x}$ -phenyl wherein x is 0, 1, 2, 3, 4, 5, 6; or $-OR^{12}$; and

if Y is C, then R^4 is hydrogen, hydroxy, halogen, cyano, amino or substituted amino, thio or substituted thio, alkyl or substituted alkyl, alkoxy or substituted alkoxy; cycloalkyl or substituted cycloalkyl; alkenyl or substituted alkenyl; 3- to 8-membered heterocycloalkyl or substituted 3- to 8-membered heterocycloalkyl, aryl or substituted aryl, heteroaryl or

substituted heteroaryl, pyrrolidinyl, $-C_xH_{2x}$ -phenyl, $-O-C_xH_{2x}$ -phenyl, or $-(C_{1-6}alkyl)N-C_xH_{2x}$ -phenyl wherein x is 0, 1, 2, 3, 4, 5, 6; or $-OR^{12}$;

wherein

if W is N, then R^1 is absent; and

if Y is N, then R^4 is absent;

R^2 and R^3 are independently selected from hydrogen, hydroxy, halogen, cyano, amino or substituted amino, thio or substituted thio, alkyl or substituted alkyl, alkoxy or substituted alkoxy; cycloalkyl or substituted cycloalkyl; alkenyl or substituted alkenyl; 3- to 8-membered heterocycloalkyl or substituted 3- to 8-membered heterocycloalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl, pyrrolidinyl, $-C_xH_{2x}$ -phenyl, $-O-C_xH_{2x}$ -phenyl, or $-(C_{1-6}alkyl)N-C_xH_{2x}$ -phenyl wherein x is 0, 1, 2, 3, 4, 5, 6; or $-OR^{12}$;

R^5 and R^6 are independently hydrogen, hydroxy, halogen, cyano, amino, alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, alkenyl or substituted alkenyl; aryl or substituted aryl, heteroaryl or substituted aryl, $-C_xH_{2x}$ -phenyl or $-O-C_xH_{2x}$ -phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6;

R^7 and R^8 are independently hydrogen, hydroxy, halogen, cyano, amino, alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, alkenyl or substituted alkenyl; aryl or substituted aryl, heteroaryl, $-C_xH_{2x}$ -phenyl or $-O-C_xH_{2x}$ -phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6;

or R^5 and R^6 together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR^{22} , S, SR^{22} or $SR^{22}R^{22i}$, wherein the 3- to 8-membered heterocycloalkyl ring is optionally substituted with R^{13} , $R^{13'}$, R^{14} and/or $R^{14'}$;

or R^6 and R^7 together form a 3- to 8-membered cycloalkyl ring or heterocycloalkyl ring comprising one heteroatom or two or more heteroatoms, optionally substituted with R^{15} , $R^{15'}$, R^{16} and/or $R^{16'}$, wherein the one heteroatom in the heteroalkyl ring is NR^{20} and the two or more heteroatoms are selected from N, NR^{22} , O, S, SR^{22} and $SR^{22}R^{22i}$;

or R^7 and R^8 together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, optionally substituted with R^{17} , $R^{17'}$, R^{18} and/or $R^{18'}$, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR^{22} , S, SR^{22} or $SR^{22}R^{22i}$;

R^9 is a bond, hydrogen, hydroxy, halogen, cyano, amino, alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, alkenyl or substituted alkenyl, heterocycloalkyl or substituted heterocycloalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl, $-C_xH_{2x}$ -phenyl or $-O-C_xH_{2x}$ -phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6;

R^{10} is a substituent shown in Table 2 or a tautomer thereof;

or R^9 is a bond and R^9 and R^{10} together form an oxaborole ring;

R¹¹ is hydrogen, hydroxy, halogen, cyano, amino, alkyl or substituted alkyl; alkenyl or substituted alkenyl; alkoxy or substituted alkoxy; cycloalkyl or substituted cycloalkyl; heterocycloalkyl or substituted heterocycloalkyl, aryl, heteroaryl, -C_xH_{2x}-phenyl or -O-C_xH_{2x}-phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6;

R¹² is hydrogen; alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, heterocycloalkyl or substituted heterocycloalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl;

R¹³, R^{13'}, R¹⁴ and R^{14'} are independently hydrogen, hydroxy, halogen, amino, aminoalkyl, cyano, C₁₋₆alkyl, C₁₋₆alkoxy, carbonyl, carboxamide, amide; or R¹³ and R^{13'} or R¹⁴ and R^{14'} together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, optionally substituted with oxygen, halogen, hydroxy, amino, cyano, C₁₋₆alkyl, C₃₋₈cycloalkyl, C₂₋₆alkenyl or C₁₋₆alkoxy, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR²², S, SR²² or SR²²R²²ⁱ;

R¹⁵, R^{15'}, R¹⁶ and R^{16'} are independently hydrogen, hydroxy, halogen, amino, cyano, C₁₋₆alkyl, or C₁₋₆alkoxy; or R¹⁵ and R^{15'} or R¹⁶ and R^{16'} together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring optionally substituted with oxygen, halogen, hydroxy, amino, cyano, C₁₋₆alkyl, C₃₋₈cycloalkyl, C₂₋₆alkenyl or C₁₋₆alkoxy, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR²², S, SR²² or SR²²R²²ⁱ;

R¹⁷, R^{17'}, R¹⁸ and R^{18'} are independently hydrogen, hydroxy, halogen, amino, cyano, C₁₋₆alkyl, or C₁₋₆alkoxy; or R¹⁷ and R¹⁸ or R^{17'} and R^{18'} together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, optionally substituted with oxygen, halogen, hydroxy, amino, cyano, C₁₋₆alkyl, C₃₋₈cycloalkyl, C₂₋₆alkenyl or C₁₋₆alkoxy, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR²², S, SR²² or SR²²R²²ⁱ;

R¹⁹, R^{19'} and R^{19''} are independently hydrogen, C₁₋₆alkyl, C₃₋₈cycloalkyl, C₂₋₆alkenyl, C₁₋₆alkoxy, phenyl, C₁₋₆alkylimidazole, C₁₋₆alkyltriazole, C₁₋₆alkyltetrazole, C₁₋₆alkylthiazole, C₁₋₆alkyloxazole, C₁₋₆alkyldioxazole; C₁₋₆alkyloxazolidone; and

R²⁰ and R²¹ are independently hydrogen, C₁₋₆alkyl, C₃₋₈cycloalkyl, C₂₋₆alkenyl, C₁₋₆alkoxy, phenyl, C₁₋₆alkylimidazole, C₁₋₆alkyltriazole, C₁₋₆alkyltetrazole, C₁₋₆alkylthiazole, C₁₋₆alkyloxazole, C₁₋₆alkyldioxazole; C₁₋₆alkyloxazolidone, or R²⁰ and R²¹ together with the nitrogen to which they are attached form unsubstituted pyrrolidinyl, unsubstituted piperidinyl, or unsubstituted morpholinyl; or form carboxyl-substituted pyrrolidinyl, carboxyl-substituted piperidinyl or carboxyl-substituted morpholinyl; and

R²² and R²²ⁱ are independently selected from hydrogen, oxygen, C₁₋₆alkyl or substituted C₁₋₆alkyl, C₁₋₆alkoxy or substituted C₁₋₆alkoxy, C₃₋₈cycloalkyl or substituted C₃₋₈cycloalkyl, C₂₋₆alkenyl or substituted C₂₋₆alkenyl, aryl or substituted aryl, including substituted or unsubstituted C₁₋₆alkylimidazole, substituted or unsubstituted C₁₋₆alkyltriazole, C₁₋₆alkyltetrazole, C₁₋₆alkylthiazole, substituted or unsubstituted C₁₋

alkyloxazole, C₁₋₆alkyldioxazole; C₁₋₆alkyloxazolidone; -COR¹⁹, -COOR^{19'}, -CSOR^{19''}, -CONR²⁰R²¹,

or a pharmaceutically acceptable salt thereof.

6. The compound of Formula I, Formula IA or Formula IB according to any of claims 1-5 or a pharmaceutically acceptable salt thereof, wherein:

R⁹ is a bond and R⁹ and R¹⁰ together form an oxaborole ring.

7. The compound of Formula I, Formula IA or Formula IB according to any of claims 1-6 or a pharmaceutically acceptable salt thereof, wherein:

W is N;

Y is C;

R² and R³ are independently selected from hydrogen, hydroxy, halogen, cyano, amino, thio, C₁₋₆alkyl or substituted C₁₋₆alkyl, C₁₋₆alkoxy or substituted C₁₋₆alkoxy; C₃₋₈cycloalkyl or substituted C₃₋₈cycloalkyl; C₂₋₈alkenyl or substituted C₂₋₈alkenyl; 3- to 8-membered heterocycloalkyl or substituted 3- to 8-membered heterocycloalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl, or

-OR¹²;

R⁵ and R⁶ are independently hydrogen, hydroxy, halogen, cyano, amino, C₁₋₆alkyl or substituted C₁₋₆alkyl, C₁₋₆alkoxy or substituted C₁₋₆alkoxy, C₃₋₈cycloalkyl or substituted C₃₋₈cycloalkyl, C₂₋₈alkenyl or substituted C₂₋₈alkenyl; aryl or substituted aryl, heteroaryl or substituted aryl, -C_xH_{2x}-phenyl or -O-C_xH_{2x}-phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6;

R⁷ and R⁸ are independently hydrogen, hydroxy, halogen, cyano, amino, C₁₋₆alkyl or substituted C₁₋₆alkyl, C₁₋₆alkoxy or substituted C₁₋₆alkoxy, C₃₋₈cycloalkyl or substituted C₃₋₈cycloalkyl, C₂₋₈alkenyl or substituted C₂₋₈alkenyl; aryl or substituted aryl, heteroaryl or substituted aryl, -C_xH_{2x}-phenyl or -O-C_xH_{2x}-phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6;

or R⁵ and R⁶ together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR²², S, SR²² or SR²²R²²ⁱ, wherein the 3- to 8-membered heterocycloalkyl ring is optionally substituted with R¹³, R^{13'}, R¹⁴ and/or R^{14'};

or R⁶ and R⁷ together form a 3- to 8-membered cycloalkyl ring or heterocycloalkyl ring comprising one heteroatom or two or more heteroatoms, optionally substituted with R¹⁵, R^{15'}, R¹⁶ and/or R^{16'}, wherein the one heteroatom in the heteroalkyl ring is NR²⁰ and the two or more heteroatoms are selected from N, NR²², O, S, SR²² and SR²²R²²ⁱ;

or R⁷ and R⁸ together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, optionally substituted with R¹⁷, R^{17'}, R¹⁸ and/or R^{18'}, wherein the heteroatom in the heterocycloalkyl ring is O, N, NR²², S, SR²² or SR²²R²²ⁱ;

R⁹ is a bond, hydrogen, hydroxy, halogen, cyano, amino, alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, alkenyl or substituted alkenyl, heterocycloalkyl or substituted heterocycloalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl, -C_xH_{2x}-phenyl or -O-C_xH_{2x}-phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6;

R¹⁰ is a substituent shown in Table 2 or a tautomer thereof;

or R⁹ is a bond and R⁹ and R¹⁰ together form an oxaborole ring;

R¹¹ is hydrogen, hydroxy, halogen, cyano, amino, C₁₋₆alkyl or substituted C₁₋₆alkyl, C₁₋₆alkoxy or substituted C₁₋₆alkoxy, C₃₋₈cycloalkyl or substituted C₃₋₈cycloalkyl, C₂₋₈alkenyl or substituted C₂₋₈alkenyl; aryl or substituted aryl, heteroaryl or substituted aryl, -C_xH_{2x}-phenyl or -O-C_xH_{2x}-phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6;

R¹² is hydrogen; C₁₋₆alkyl or substituted C₁₋₆alkyl, C₁₋₆alkoxy or substituted C₁₋₆alkoxy, C₃₋₈cycloalkyl or substituted C₃₋₈cycloalkyl, C₃₋₈heterocycloalkyl or substituted C₃₋₈heterocycloalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl; and

R²² and R^{22'} are independently selected from hydrogen, oxygen, C₁₋₆alkyl or substituted C₁₋₆alkyl, C₁₋₆alkoxy or substituted C₁₋₆alkoxy, C₃₋₈cycloalkyl or substituted C₃₋₈cycloalkyl, C₂₋₆alkenyl or substituted C₂₋₆alkenyl, aryl or substituted aryl, -COR¹⁹, -COOR^{19'}, -CSOR^{19''}, -CONR²⁰R²¹.

8. The compound of Formula I, Formula IA or Formula IB or pharmaceutically acceptable salt thereof according to any of claims 1-7, wherein:

W is N;

Y is C;

R¹ is absent;

R² and R³ are independently selected from hydrogen, hydroxy, halogen, , C₁₋₆alkyl or substituted C₁₋₆alkyl, C₁₋₆alkoxy or substituted C₁₋₆alkoxy; C₃₋₈cycloalkyl or substituted C₃₋₈cycloalkyl; C₂₋₈alkenyl or substituted C₂₋₈alkenyl; or -OR¹²;

R⁴ is H;

R⁶ and R⁷ together form a 3- to 8-membered cycloalkyl ring, optionally substituted with R¹⁵, R^{15'}, R¹⁶ and/or R^{16'};

R¹¹ is H; and

R¹⁵, R^{15'}, R¹⁶ and/or R^{16'} are independently hydrogen, hydroxy, halogen, amino, cyano, C₁₋₆alkyl, or C₁₋₆alkoxy.

9. The compound of Formula I, Formula IA or Formula IB or a pharmaceutically acceptable salt thereof according to any of claims 1-8, wherein:

W is N;

Y is C:

R¹ is absent;
R² is halogen;
R³ is OR¹²; and
R⁴ is H.

10. The compound of Formula I, Formula IA or Formula IB or pharmaceutically acceptable salt thereof according to any of claims 1-9,

wherein:

W is N;

Y is C;

R¹ is absent;

R² is halogen and R³ is –OR¹²;

R⁴ is H;

R⁶ and R⁷ together form a 3- to 8-membered cycloalkyl ring, optionally substituted with R¹⁵, R^{15'}, R¹⁶ and/or R^{16'};

R¹¹ is H; and

R¹⁵, R^{15'}, R¹⁶ and/or R^{16'} are independently C₁₋₆alkyl.

11. The compound of Formula I, Formula IA or Formula IB or pharmaceutically acceptable salt thereof according to any of claims 1-10,

wherein:

R⁶ and R⁷ together form a 3- to 8-membered cycloalkyl ring, optionally substituted with R¹⁵, R^{15'}, R¹⁶ and/or R^{16'}.

12. The compound of Formula I, Formula IA or Formula IB or pharmaceutically acceptable salt thereof according to any of claims 1-11,

wherein:

R⁷ and R⁸ together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, optionally substituted with R¹⁷ and R¹⁸, wherein the heteroatom in the heterocycloalkyl ring is selected from O, N, NR²², S, SR²² or SR²²R^{22'}.

13. A compound selected from the group:

(4bR,7aS)-2-chloro-3-(3-methoxypropoxy)-7,7-dimethyl-11-oxo-4b,5,6,7,7a,11-hexahydrocyclopenta[f]pyrido[1,2-h][1,7]naphthyridine-10-carboxylic acid;

(4bS,7aR)-2-Chloro-3-(3-methoxypropoxy)-7,7-dimethyl-11-oxo-4b,5,6,7,7a,11-hexahydrocyclopenta[f]pyrido[1,2-h][1,7]naphthyridine-10-carboxylic acid;

(4bR,7aS)-2-Cyclopropyl-3-(3-methoxypropoxy)-7,7-dimethyl-11-oxo-4b,5,6,7,7a,11-hexahydrocyclopenta[f]pyrido[1,2-h][1,7]naphthyridine-10-carboxylic acid;

2-Cyclopropyl-3-(3-methoxypropoxy)-7,7-dimethyl-11-oxo-4b,5,6,7,7a,11-hexahydrocyclopenta[f]pyrido[1,2-h][1,7]naphthyridine-10-carboxylic acid;

(7aR)-2-Cyclopropyl-4b-hydroxy-3-(3-methoxypropoxy)-7,7-dimethyl-11-oxo-4b,5,6,7,7a,11-hexahydrocyclopenta[f]pyrido[1,2-h][1,7]naphthyridine-10-carboxylic acid;

(7aR)-2-Chloro-4b-hydroxy-3-(3-methoxypropoxy)-7,7-dimethyl-11-oxo-4b,5,6,7,7a,11-hexahydrocyclopenta[f]pyrido[1,2-h][1,7]naphthyridine-10-carboxylic acid;

(7aR)-2-Chloro-4b-methoxy-3-(3-methoxypropoxy)-7,7-dimethyl-11-oxo-4b,5,6,7,7a,11-hexahydrocyclopenta[f]pyrido[1,2-h][1,7]naphthyridine-10-carboxylic acid;

(4bR,7aS)-2-Hydroxy-3-(3-methoxypropoxy)-7,7-dimethyl-11-oxo-4b,5,6,7,7a,11-hexahydrocyclopenta[f]pyrido[1,2-h][1,7]naphthyridine-10-carboxylic acid;

(4bR,7aS)-2-Chloro-3-hydroxy-7,7-dimethyl-11-oxo-4b,5,6,7,7a,11-hexahydrocyclopenta[f]pyrido[1,2-h][1,7]naphthyridine-10-carboxylic acid;

2-Chloro-6-(1-hydroxy-2-methylpropan-2-yl)-3-(3-methoxypropoxy)-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-2-chloro-3-(3-methoxypropoxy)-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-3-(cyclopropylmethoxy)-2-methyl-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-3-(3-methoxypropoxy)-2-methyl-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-2-cyclopropyl-3-(cyclopropylmethoxy)-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-2-cyclopropyl-3-(3-methoxypropoxy)-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(R)-6-(tert-butyl)-3-(cyclopropylmethoxy)-2-methoxy-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-3-(cyclopropylmethoxy)-2-methoxy-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-3-(cyclopropylmethoxy)-2-hydroxy-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-2-methoxy-3-(3-methoxypropoxy)-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-2-hydroxy-3-(3-methoxypropoxy)-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-3-(3-methoxypropoxy)-10-oxo-2-(prop-1-en-2-yl)-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-2-isopropyl-3-(3-methoxypropoxy)-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-2-chloro-3-(3-methoxypropoxy)-8-methyl-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-2-(hydroxymethyl)-3-(3-methoxypropoxy)-10-oxo-5,10-dihydro-6H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(S)-6-(tert-butyl)-2-cyclopropyl-11-hydroxy-3-(3-methoxypropoxy)-10-oxo-5,10-dihydro-6H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(2-chloro-3-(cyclopropylmethoxy)-6-isopropyl-6-methyl-10-oxo-5,10-dihydro-6H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

(2-chloro-3-(cyclopropylmethoxy)-6-isopropyl-6-methyl-10-oxo-5,10-dihydro-6H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

2-cyclopropyl-6-isopropyl-3-(3-methoxypropoxy)-6-methyl-10-oxo-5,10-dihydro-6H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

2-cyclopropyl-6-isopropyl-3-(3-methoxypropoxy)-6-methyl-10-oxo-5,10-dihydro-6H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

6-(tert-butyl)-2-chloro-3-(cyclopropylmethoxy)-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid;

2'-Chloro-3'-(cyclopropylmethoxy)-10'-oxo-5',10'-dihydrospiro[cyclobutane-1,6'-pyrido[1,2-h][1,7]naphthyridine]-9'-carboxylic acid;

2',3'-Dimethoxy-10'-oxo-5',10'-dihydrospiro[cyclobutane-1,6'-pyrido[1,2-h][1,7]naphthyridine]-9'-carboxylic acid;

6-Isopropyl-2,3-dimethyl-10-oxo-5,10-dihydro-6H-pyrido[2,1-f][1,6]naphthyridine-9-carboxylic acid;

2-chloro-3-(3-methoxypropoxy)-7,7-dimethyl-11-oxo-4b,5,6,7,7a,11-hexahydrocyclopenta[f]pyrido[1,2-h][1,7]naphthyridine-10-carboxylic acid;

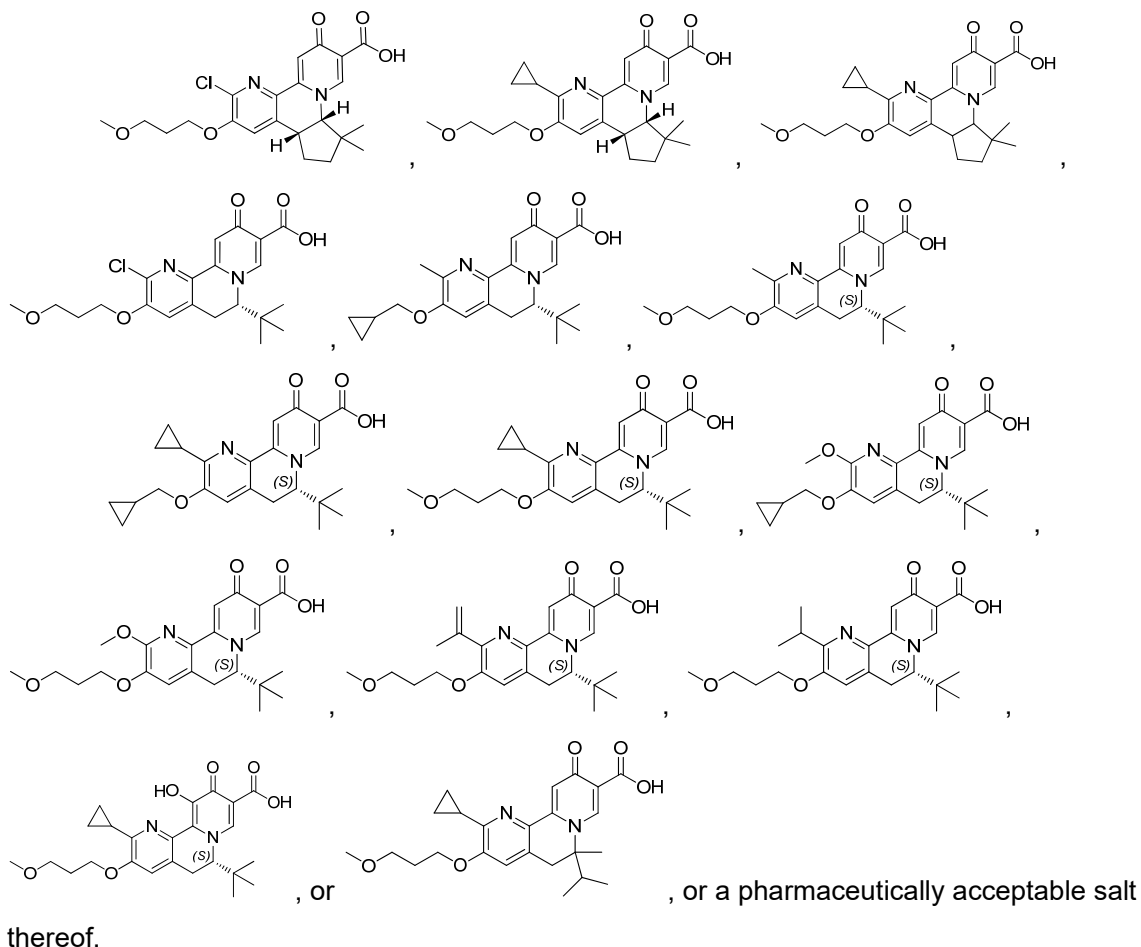
3'-(cyclopropylmethoxy)-2'-(difluoromethyl)-11'-fluoro-10'-oxo-5',10'-dihydrospiro[cyclobutane-1,6'-pyrido[1,2-h][1,7]naphthyridine]-9'-carboxylic acid;

2'-(difluoromethyl)-11'-fluoro-10'-oxo-3'-((tetrahydrofuran-3-yl)methoxy)-5',10'-dihydrospiro[cyclobutane-1,6'-pyrido[1,2-h][1,7]naphthyridine]-9'-carboxylic acid;

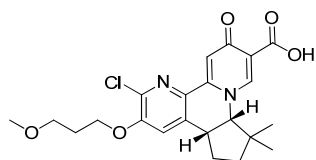
(S)-3-(cyclopropylmethoxy)-2-(difluoromethyl)-11'-fluoro-6-isopropyl-6-methyl-10-oxo-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid; and

(6S)-2-(difluoromethyl)-11'-fluoro-6-isopropyl-6-methyl-10-oxo-3'-((tetrahydrofuran-3-yl)methoxy)-6,10-dihydro-5H-pyrido[1,2-h][1,7]naphthyridine-9-carboxylic acid; or a pharmaceutically acceptable salt or tautomer thereof.

14. The compound according to claim 1 selected from:

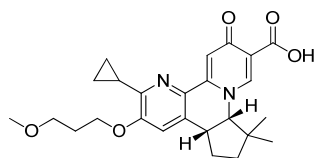


15. The compound of claim 1 whose structure is:



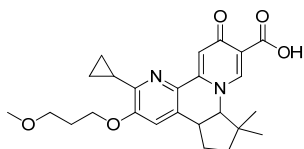
, or a pharmaceutically acceptable salt thereof.

16. The compound of claim 1 whose structure is:



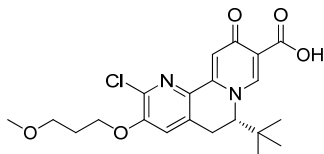
, or a pharmaceutically acceptable salt thereof.

17. The compound of claim 1 whose structure is:



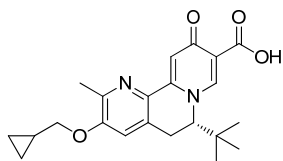
, or a pharmaceutically acceptable salt thereof.

18. The compound of claim 1 whose structure is:



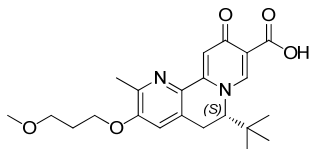
, or a pharmaceutically acceptable salt thereof.

19. The compound of claim 1 whose structure is:



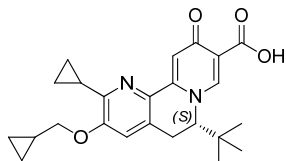
, or a pharmaceutically acceptable salt thereof.

20. The compound of claim 1 whose structure is:



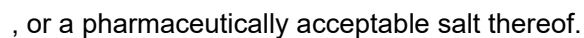
, or a pharmaceutically acceptable salt thereof.

21. The compound of claim 1 whose structure is:

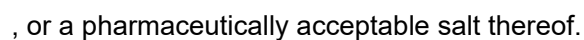


, or a pharmaceutically acceptable salt thereof.

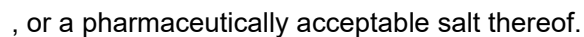
22. The compound of claim 1 whose structure is:



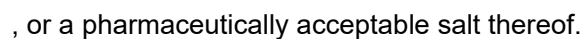
23. The compound of claim 1 whose structure is:



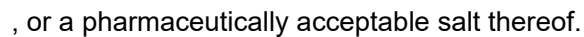
24. The compound of claim 1 whose structure is:



25. The compound of claim 1 whose structure is:



26. The compound of claim 1 whose structure is:

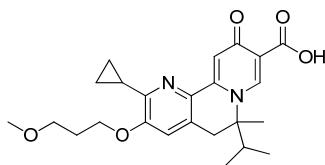


27. The compound of claim 1 whose structure is:



, or a pharmaceutically acceptable salt thereof.

28. The compound of claim 1 whose structure is:



, or a pharmaceutically acceptable salt thereof.

29. The compound of Formula I, Formula IA or Formula IB according to any of claims 1 - 28 or a pharmaceutically acceptable salt thereof, wherein:

(A) R^5 and R^6 are independently hydroxy, halogen, cyano, amino, alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, alkenyl or substituted alkenyl; aryl or substituted aryl, heteroaryl or substituted heteroaryl, $-C_xH_{2x}-$ phenyl or $-O-C_xH_{2x}-$ phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6; or R^5 and R^6 together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring, optionally substituted with R^{13} , $R^{13'}$, R^{14} and/or $R^{14'}$, wherein the heteroatom in the heterocycloalkyl ring is selected from O, N, NR^{22} , S, SR^{22} or $SR^{22}R^{22'}$; and

R^7 and R^8 are independently hydrogen, hydroxy, halogen, cyano, amino, alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, alkenyl or substituted alkenyl; aryl or substituted aryl, heteroaryl or substituted heteroaryl, $-C_xH_{2x}-$ phenyl or $-O-C_xH_{2x}-$ phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6; or

(B) R^5 and R^8 are independently hydrogen, hydroxy, halogen, cyano, amino, alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, alkenyl or substituted alkenyl; aryl or substituted aryl, heteroaryl or substituted heteroaryl, $-C_xH_{2x}-$ phenyl or $-O-C_xH_{2x}-$ phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6; and

R^6 and R^7 together form a 3- to 8-membered cycloalkyl ring or 3- to 8- membered heterocycloalkyl ring comprising one heteroatom or two or more heteroatoms, optionally substituted with R^{15} , $R^{15'}$, R^{16} and/or $R^{16'}$, wherein the one heteroatom in the heteroalkyl ring is NR^{20} and the two or more heteroatoms are selected from N, NR^{22} , O, S, SR^{22} and $SR^{22}R^{22'}$; or

(C) R^5 and R^6 are independently hydrogen, hydroxy, halogen, cyano, amino, alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, alkenyl or substituted alkenyl; aryl or substituted aryl, heteroaryl or substituted heteroaryl, $-C_xH_{2x}-$ phenyl or $-O-C_xH_{2x}-$ phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6; and

R⁷ and R⁸ are independently hydroxy, halogen, cyano, amino, alkyl or substituted alkyl, alkoxy or substituted alkoxy, cycloalkyl or substituted cycloalkyl, alkenyl or substituted alkenyl; aryl or substituted aryl, heteroaryl, -C_xH_{2x}-phenyl or -O-C_xH_{2x}-phenyl wherein x is 0, 1, 2, 3, 4, 5 or 6; or R⁷ and R⁸ together form a 3- to 8-membered cycloalkyl ring or a 3- to 8-membered heterocycloalkyl ring, optionally substituted with R¹⁷, R¹⁸, R¹⁷ and/or R¹⁸, wherein the heteroatom in the heterocycloalkyl ring is selected from O, N, NR²², S, SR²² or SR²²R²².

30. The compound of Formula I, Formula IA or Formula IB according to any of claims 1-28 or a pharmaceutically acceptable salt thereof, wherein the compound is selected from the compounds of Table 1, and wherein R¹⁰ is as described herein or is a substituent shown in Table 2, or a tautomer thereof.

31. Use of an inhibitor of a HBe or HBs antigen for the manufacture of a medicament for the treatment or prevention of a virus infection in a subject susceptible to or suffering from the virus infection, wherein the inhibitor is a compound of Formula I, Formula IA or Formula IB according to any one of claims 1-30.

32. Use of an inhibitor of a HBe or HBs antigen for the manufacture of a medicament for the treatment or prevention of hepatitis B virus infection in a subject susceptible to or suffering from the hepatitis B virus infection, wherein the inhibitor is a compound of Formula I, Formula IA or Formula IB according to any one of claims 1-30.

33. Use of an inhibitor of a HBe or HBs antigen for the manufacture of a medicament for the treatment or prevention of hepatitis B virus infection in a subject susceptible to or suffering from the hepatitis B virus infection, wherein the inhibitor comprises a compound from Table, 1 wherein R¹⁰ is a substituent shown in Table 2 or tautomer thereof, or wherein the inhibitor is a compound from Table IB.

34. Use of a therapeutically effective amount of a compound of Formula I, Formula IA or Formula IB according to any one of claims 1-30, or a pharmaceutically acceptable salt, solvate or hydrate thereof, for the manufacture of a medicament for inhibiting the level of HBe or HBs antigen in a mammal.

35. The use according to claim 34, wherein the mammal is a human.

36. A pharmaceutical composition comprising a pharmaceutically acceptable

diluent and a therapeutically effective amount of a compound as defined in Formula I, Formula IA or Formula IB according to any of claims 1-30.

37. A compound of Formula I, Formula IA or Formula IB according to any of claims 1-30, or a pharmaceutical composition according to claim 36, for use in therapy.

38. The compound of Formula I, Formula IA or Formula IB according to any of claims 1-30, or the pharmaceutical composition according to claim 36, for use in the treatment of a viral infection.

39. The compound according to claim 38 for use in the treatment of a viral infection, wherein the viral infection is a hepatitis B viral infection.

40. Use of a compound of Formula I, Formula IA or Formula IB according to any of claims 1-30, 38 or 39 or a pharmaceutical composition according to claim 36, in the manufacture of a medicament for use in the treatment of a hepatitis B viral infection in a human.

41. A compound or pharmaceutically acceptable salt according to any one of claims 1-30 for use in medical therapy.

42. A compound or pharmaceutically acceptable salt according to any one of claims 1-30 for use in the treatment or prevention of a hepatitis B viral infection in a human.

43. A compound or pharmaceutically acceptable salt according to any one of claims 1-30 for use in inhibiting the level of HBe or HBs antigen in a mammal HBsAg *in vitro*.