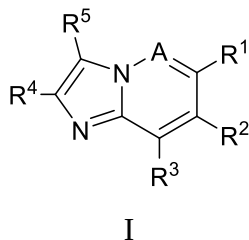


What is claimed is:

1. A compound of Formula I:



or a pharmaceutically acceptable salt thereof, wherein:

R^1 is selected from C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{1-6} haloalkyl, CN, $C(O)R^b$, $C(O)NR^cR^d$, $C(O)OR^a$, $C(=NR^e)R^b$, $C(=NOR^a)R^b$, and $C(=NR^e)NR^cR^d$, wherein said C_{1-6} alkyl, C_{2-6} alkenyl and C_{2-6} alkynyl are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{10} ;

R^2 is selected from C_{6-10} aryl and 5-10 membered heteroaryl; wherein the 5-10 membered heteroaryl has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein the N and S are optionally oxidized; wherein a ring-forming carbon atom of the 5-10 membered heteroaryl is optionally substituted by oxo to form a carbonyl group; and wherein the C_{6-10} aryl and 5-10 membered heteroaryl are each optionally substituted with 1, 2, 3, 4 or 5 substituents independently selected from R^{20} ;

or two adjacent R^{20} substituents on R^2 , taken together with the atoms to which they are attached, form a fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring, or a fused C_{3-7} cycloalkyl ring; wherein the fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring each has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein a ring-forming carbon atom of each fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring is optionally substituted by oxo to form a carbonyl group; and wherein the fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring and fused C_{3-7} cycloalkyl ring are each optionally substituted with 1, 2, 3 or 4 substituents independently selected from R^{21} ;

R^3 is selected from H and C_{1-6} alkyl;

R^4 is selected from H and C_{1-6} alkyl;

R^5 is selected from C_{6-10} aryl and 5-10 membered heteroaryl; wherein the 5-10 membered heteroaryl has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein the N and S are optionally oxidized; wherein a

ring-forming carbon atom of the 5-10 membered heteroaryl is optionally substituted by oxo to form a carbonyl group; and wherein the C₆₋₁₀ aryl and 5-10 membered heteroaryl are each optionally substituted with 1, 2, 3, 4 or 5 substituents independently selected from R⁵⁰;

or two adjacent R⁵⁰ substituents on R⁵, taken together with the atoms to which they are attached, form a fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring, or a fused C₃₋₇ cycloalkyl ring; wherein the fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring each has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein a ring-forming carbon atom of each fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring is optionally substituted by oxo to form a carbonyl group; and wherein the fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring and fused C₃₋₇ cycloalkyl ring are each optionally substituted with 1, 2, 3 or 4 substituents independently selected from R⁵¹;

A is N;

each R¹⁰ is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₅₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, 5-10 membered heteroaryl-C₁₋₃ alkylene, halo, D, CN, NO₂, OR^{a1}, SR^{a1}, C(O)R^{b1}, C(O)NR^{c1}R^{d1}, C(O)OR^{a1}, OC(O)R^{b1}, OC(O)NR^{c1}R^{d1}, NR^{c1}R^{d1}, NR^{c1}C(O)R^{b1}, NR^{c1}C(O)OR^{a1}, NR^{c1}C(O)NR^{c1}R^{d1}, C(=NR^{e1})R^{b1}, C(=NOR^{a1})R^{b1}, C(=NR^{e1})NR^{c1}R^{d1}, NR^{c1}C(=NR^{e1})NR^{c1}R^{d1}, NR^{c1}S(O)R^{b1}, NR^{c1}S(O)₂R^{b1}, NR^{c1}S(O)₂NR^{c1}R^{d1}, S(O)R^{b1}, S(O)NR^{c1}R^{d1}, and S(O)₂NR^{c1}R^{d1}; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene and 5-10 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹¹;

or two R¹⁰ substituents taken together with the carbon atom to which they are attached form a spiro 4-7-membered heterocycloalkyl ring, or a spiro C₃₋₆ cycloalkyl ring; wherein each spiro 4-7-membered heterocycloalkyl ring has at least one ring-forming carbon atom and 1, 2 or 3, ring-forming heteroatoms independently selected from N, O, and S; wherein a ring-forming carbon atom of each spiro 4-7-membered heterocycloalkyl ring is optionally substituted by oxo to form a carbonyl group; and wherein the spiro 4-7-membered heterocycloalkyl ring and spiro

C₃₋₆ cycloalkyl ring are each optionally substituted with 1, 2, 3 or 4 substituents independently selected from R¹¹;

each R¹¹ is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, 5-10 membered heteroaryl-C₁₋₃ alkylene, halo, D, CN, OR^{a3}, SR^{a3}, C(O)R^{b3}, C(O)NR^{c3}R^{d3}, C(O)OR^{a3}, NR^{c3}R^{d3}, NR^{c3}C(O)R^{b3}, NR^{c3}C(O)OR^{a3}, NR^{c3}S(O)R^{b3}, NR^{c3}S(O)₂R^{b3}, NR^{c3}S(O)₂NR^{c3}R^{d3}, S(O)R^{b3}, S(O)NR^{c3}R^{d3}, S(O)₂R^{b3}, and S(O)₂NR^{c3}R^{d3}; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene and 5-10 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹²;

each R¹² is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₆ cycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, 4-7 membered heterocycloalkyl, C₃₋₆ cycloalkyl-C₁₋₃ alkylene, 4-7 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, 5-10 membered heteroaryl-C₁₋₃ alkylene, halo, D, CN, OR^{a5}, SR^{a5}, C(O)R^{b5}, C(O)NR^{c5}R^{d5}, C(O)OR^{a5}, NR^{c5}R^{d5}, NR^{c5}C(O)R^{b5}, NR^{c5}C(O)OR^{a5}, NR^{c5}S(O)R^{b5}, NR^{c5}S(O)₂R^{b5}, NR^{c5}S(O)₂NR^{c5}R^{d5}, S(O)R^{b5}, S(O)NR^{c5}R^{d5}, S(O)₂R^{b5}, and S(O)₂NR^{c5}R^{d5}; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₆ cycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, 4-7 membered heterocycloalkyl, C₃₋₆ cycloalkyl-C₁₋₃ alkylene, 4-7 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^g;

each R²⁰ is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, 5-10 membered heteroaryl-C₁₋₃ alkylene, halo, D, CN, NO₂, OR^{a2}, SR^{a2}, C(O)R^{b2}, C(O)NR^{c2}R^{d2}, C(O)OR^{a2}, OC(O)R^{b2}, OC(O)NR^{c2}R^{d2}, NR^{c2}R^{d2}, NR^{c2}C(O)R^{b2}, NR^{c2}C(O)OR^{a2}, NR^{c2}C(O)NR^{c2}R^{d2}, C(=NR^{e2})R^{b2}, C(=NOR^{a2})R^{b2}, C(=NR^{e2})NR^{c2}R^{d2}, NR^{c2}C(=NR^{e2})NR^{c2}R^{d2}, NR^{c2}S(O)R^{b2}, NR^{c2}S(O)₂R^{b2}, NR^{c2}S(O)₂NR^{c2}R^{d2}, S(O)R^{b2}, S(O)NR^{c2}R^{d2}, S(O)₂R^{b2}, and S(O)₂NR^{c2}R^{d2}; wherein a ring-forming carbon atom of the 4-10 membered heterocycloalkyl is optionally substituted by oxo to form a carbonyl group; wherein

said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene and 5-10 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R²¹;

each R²¹ is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, 5-10 membered heteroaryl-C₁₋₃ alkylene, halo, D, CN, OR^{a4}, SR^{a4}, C(O)R^{b4}, C(O)NR^{c4}R^{d4}, C(O)OR^{a4}, NR^{c4}R^{d4}, NR^{c4}C(O)R^{b4}, NR^{c4}C(O)OR^{a4}, NR^{c4}S(O)R^{b4}, NR^{c4}S(O)₂R^{b4}, NR^{c4}S(O)₂NR^{c4}R^{d4}, S(O)R^{b4}, S(O)NR^{c4}R^{d4}, S(O)₂R^{b4}, and S(O)₂NR^{c4}R^{d4}; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene and 5-10 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R²²;

each R²² is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₆ cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C₃₋₆ cycloalkyl-C₁₋₃ alkylene, 4-7 membered heterocycloalkyl-C₁₋₃ alkylene, phenyl-C₁₋₃ alkylene, 5-6 membered heteroaryl-C₁₋₃ alkylene, halo, D, CN, OR^{a6}, SR^{a6}, C(O)R^{b6}, C(O)NR^{c6}R^{d6}, C(O)OR^{a6}, NR^{c6}R^{d6}, NR^{c6}C(O)R^{b6}, NR^{c6}C(O)OR^{a6}, NR^{c6}S(O)R^{b6}, NR^{c6}S(O)₂R^{b6}, NR^{c6}S(O)₂NR^{c6}R^{d6}, S(O)R^{b6}, S(O)NR^{c6}R^{d6}, S(O)₂R^{b6}, and S(O)₂NR^{c6}R^{d6}; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₆ cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C₃₋₆ cycloalkyl-C₁₋₃ alkylene, 4-7 membered heterocycloalkyl-C₁₋₃ alkylene, phenyl-C₁₋₃ alkylene, and 5-6 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^g;

each R⁵⁰ is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, 5-10 membered heteroaryl-C₁₋₃ alkylene, halo, D, CN, NO₂, OR^{a9}, SR^{a9}, C(O)R^{b9}, C(O)NR^{c9}R^{d9}, C(O)OR^{a9}, OC(O)R^{b9}, OC(O)NR^{c9}R^{d9}, NR^{c9}R^{d9}, NR^{c9}C(O)R^{b9}, NR^{c9}C(O)OR^{a9}, NR^{c9}C(O)NR^{c9}R^{d9}, C(=NR^{e9})R^{b9}, C(=NOR^{a9})R^{b9}, C(=NR^{e9})NR^{c9}R^{d9}, NR^{c9}C(=NR^{e9})NR^{c9}R^{d9}, NR^{c9}S(O)R^{b9}, NR^{c9}S(O)₂R^{b9}, NR^{c9}S(O)₂NR^{c9}R^{d9}, S(O)R^{b9},

$S(O)NR^{c9}R^{d9}$, $S(O)_2R^{b9}$, and $S(O)_2NR^{c9}R^{d9}$; wherein said C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-10} cycloalkyl, 4-10 membered heterocycloalkyl, C_{6-10} aryl, 5-10 membered heteroaryl, C_{3-10} cycloalkyl- C_{1-3} alkylene, 4-10 membered heterocycloalkyl- C_{1-3} alkylene, C_{6-10} aryl- C_{1-3} alkylene and 5-10 membered heteroaryl- C_{1-3} alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{51} ;

each R^{51} is independently selected from C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{1-6} haloalkyl, C_{3-10} cycloalkyl, 4-10 membered heterocycloalkyl, C_{6-10} aryl, 5-10 membered heteroaryl, C_{3-10} cycloalkyl- C_{1-3} alkylene, 4-10 membered heterocycloalkyl- C_{1-3} alkylene, C_{6-10} aryl- C_{1-3} alkylene, 5-10 membered heteroaryl- C_{1-3} alkylene, halo, D, CN, OR^{a10} , SR^{a10} , $C(O)R^{b10}$, $C(O)NR^{c10}R^{d10}$, $C(O)OR^{a10}$, $NR^{c10}R^{d10}$, $NR^{c10}C(O)R^{b10}$, $NR^{c10}C(O)OR^{a10}$, $NR^{c10}S(O)R^{b10}$, $NR^{c10}S(O)_2R^{b10}$, $NR^{c10}S(O)_2NR^{c10}R^{d10}$, $S(O)R^{b10}$, $S(O)NR^{c10}R^{d10}$, $S(O)_2R^{b10}$, and $S(O)_2NR^{c10}R^{d10}$; wherein said C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-10} cycloalkyl, 4-10 membered heterocycloalkyl, C_{6-10} aryl, 5-10 membered heteroaryl, C_{3-10} cycloalkyl- C_{1-3} alkylene, 4-10 membered heterocycloalkyl- C_{1-3} alkylene, C_{6-10} aryl- C_{1-3} alkylene and 5-10 membered heteroaryl- C_{1-3} alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{52} ;

each R^{52} is independently selected from C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{1-6} haloalkyl, C_{3-6} cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C_{3-6} cycloalkyl- C_{1-3} alkylene, 4-7 membered heterocycloalkyl- C_{1-3} alkylene, phenyl- C_{1-3} alkylene, 5-6 membered heteroaryl- C_{1-3} alkylene, halo, D, CN, OR^{a11} , SR^{a11} , $C(O)R^{b11}$, $C(O)NR^{c11}R^{d11}$, $C(O)OR^{a11}$, $NR^{c11}R^{d11}$, $NR^{c11}C(O)R^{b11}$, $NR^{c11}C(O)OR^{a11}$, $NR^{c11}S(O)R^{b11}$, $NR^{c11}S(O)_2R^{b11}$, $NR^{c11}S(O)_2NR^{c11}R^{d11}$, $S(O)R^{b11}$, $S(O)NR^{c11}R^{d11}$, $S(O)_2R^{b11}$, and $S(O)_2NR^{c11}R^{d11}$; wherein said C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C_{3-6} cycloalkyl- C_{1-3} alkylene, 4-7 membered heterocycloalkyl- C_{1-3} alkylene, phenyl- C_{1-3} alkylene, and 5-6 membered heteroaryl- C_{1-3} alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^g ;

each R^a , R^c , and R^d is independently selected from H, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{1-6} haloalkyl, C_{3-10} cycloalkyl, 4-10 membered heterocycloalkyl, C_{6-10} aryl, 5-10 membered heteroaryl, C_{3-10} cycloalkyl- C_{1-3} alkylene, 4-10 membered heterocycloalkyl- C_{1-3} alkylene, C_{6-10} aryl- C_{1-3} alkylene, and 5-10 membered heteroaryl- C_{1-3} alkylene; wherein said C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-10} cycloalkyl, 4-10 membered heterocycloalkyl, C_{6-10} aryl, 5-

10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹⁰;

or any R^c and R^d attached to the same N atom, together with the N atom to which they are attached, form a 4-10 membered heterocycloalkyl group optionally substituted with 1, 2, 3 or 4 substituents independently selected from R¹⁰;

each R^b is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹⁰;

each R^e is independently selected from H, CN, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkylthio, C₁₋₆ alkylsulfonyl, C₁₋₆ alkylcarbonyl, C₁₋₆ alkylaminosulfonyl, carbamyl, C₁₋₆ alkylcarbamyl, di(C₁₋₆ alkyl)carbamyl, aminosulfonyl, C₁₋₆ alkylaminosulfonyl and di(C₁₋₆ alkyl)aminosulfonyl;

each R^{al}, R^{cl} and R^{dl} is independently selected from H, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹¹;

or any R^{cl} and R^{dl} attached to the same N atom, together with the N atom to which they are attached, form a 4-10 membered heterocycloalkyl group optionally substituted with 1, 2, 3 or 4 substituents independently selected from R¹¹;

each R^{bl} is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀

aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹¹;

each R^{e1} is independently selected from H, CN, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkylthio, C₁₋₆ alkylsulfonyl, C₁₋₆ alkylcarbonyl, C₁₋₆ alkylaminosulfonyl, carbamyl, C₁₋₆ alkylcarbamyl, di(C₁₋₆ alkyl)carbamyl, aminosulfonyl, C₁₋₆ alkylaminosulfonyl and di(C₁₋₆ alkyl)aminosulfonyl;

each R^{a2}, R^{c2} and R^{d2} is independently selected from H, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R²¹;

or any R^{c2} and R^{d2} attached to the same N atom, together with the N atom to which they are attached, form a 4-10 membered heterocycloalkyl group optionally substituted with 1, 2, 3 or 4 substituents independently selected from R²¹;

each R^{b2} is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R²¹;

each R^{e2} is independently selected from H, CN, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkylthio, C₁₋₆ alkylsulfonyl, C₁₋₆ alkylcarbonyl, C₁₋₆ alkylaminosulfonyl, carbamyl, C₁₋₆ alkylcarbamyl, di(C₁₋₆ alkyl)carbamyl, aminosulfonyl, C₁₋₆ alkylaminosulfonyl and di(C₁₋₆ alkyl)aminosulfonyl;

each R^{a3} , R^{c3} and R^{d3} is independently selected from H, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{1-6} haloalkyl, C_{3-6} cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C_{3-6} cycloalkyl- C_{1-3} alkylene, 4-7 membered heterocycloalkyl- C_{1-3} alkylene, phenyl- C_{1-3} alkylene, and 5-6 membered heteroaryl- C_{1-3} alkylene; wherein said C_{1-6} alkyl C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C_{3-6} cycloalkyl- C_{1-3} alkylene, 4-7 membered heterocycloalkyl- C_{1-3} alkylene, phenyl- C_{1-3} alkylene, and 5-6 membered heteroaryl- C_{1-3} alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{12} ;

or any R^{c3} and R^{d3} attached to the same N atom, together with the N atom to which they are attached, form a 4-, 5-, 6- or 7-membered heterocycloalkyl group optionally substituted with 1, 2 or 3 substituents independently selected from R^{12} ;

each R^{b3} is independently selected from C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{1-6} haloalkyl, C_{3-6} cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C_{3-6} cycloalkyl- C_{1-3} alkylene, 4-7 membered heterocycloalkyl- C_{1-3} alkylene, phenyl- C_{1-3} alkylene, and 5-6 membered heteroaryl- C_{1-3} alkylene; wherein said C_{1-6} alkyl C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C_{3-6} cycloalkyl- C_{1-3} alkylene, 4-7 membered heterocycloalkyl- C_{1-3} alkylene, phenyl- C_{1-3} alkylene, and 5-6 membered heteroaryl- C_{1-3} alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{12} ;

each R^{a4} , R^{c4} and R^{d4} is independently selected from H, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{1-6} haloalkyl, C_{3-6} cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C_{3-6} cycloalkyl- C_{1-3} alkylene, 4-7 membered heterocycloalkyl- C_{1-3} alkylene, phenyl- C_{1-3} alkylene, and 5-6 membered heteroaryl- C_{1-3} alkylene; wherein said C_{1-6} alkyl C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C_{3-6} cycloalkyl- C_{1-3} alkylene, 4-7 membered heterocycloalkyl- C_{1-3} alkylene, phenyl- C_{1-3} alkylene, and 5-6 membered heteroaryl- C_{1-3} alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{22} ;

or any R^{c4} and R^{d4} attached to the same N atom, together with the N atom to which they are attached, form a 4-, 5-, 6- or 7-membered heterocycloalkyl group optionally substituted with 1, 2 or 3 substituents independently selected from R^{22} ;

each R^{b4} is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₆ cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C₃₋₆ cycloalkyl-C₁₋₃ alkylene, 4-7 membered heterocycloalkyl-C₁₋₃ alkylene, phenyl-C₁₋₃ alkylene, and 5-6 membered heteroaryl-C₁₋₃ alkylene; wherein said C₁₋₆ alkyl C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₆ cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C₃₋₆ cycloalkyl-C₁₋₃ alkylene, 4-7 membered heterocycloalkyl-C₁₋₃ alkylene, phenyl-C₁₋₃ alkylene, and 5-6 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R²²;

each R^{a5}, R^{c5} and R^{d5} is independently selected from H, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl and C₁₋₆ haloalkyl; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl and C₂₋₆ alkynyl are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^g;

or any R^{c5} and R^{d5} attached to the same N atom, together with the N atom to which they are attached, form a 4-, 5-, 6- or 7-membered heterocycloalkyl group optionally substituted with 1, 2 or 3 substituents independently selected from R^g;

each R^{b5} is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl and C₁₋₆ haloalkyl; wherein said C₁₋₆ alkyl C₂₋₆ alkenyl and C₂₋₆ alkynyl are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^g;

each R^{a6}, R^{c6} and R^{d6} is independently selected from H, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl and C₁₋₆ haloalkyl; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl and C₂₋₆ alkynyl are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^g;

or any R^{c6} and R^{d6} attached to the same N atom, together with the N atom to which they are attached, form a 4-, 5-, 6- or 7-membered heterocycloalkyl group optionally substituted with 1, 2 or 3 substituents independently selected from R^g;

each R^{b6} is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, and C₁₋₆ haloalkyl; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl and C₂₋₆ alkynyl are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^g;

each R^{a9}, R^{c9} and R^{d9} is independently selected from H, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-

10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵¹;

or any R^{e9} and R^{d9} attached to the same N atom, together with the N atom to which they are attached, form a 4-10 membered heterocycloalkyl group optionally substituted with 1, 2, 3 or 4 substituents independently selected from R⁵¹;

each R^{b9} is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₃₋₁₀ cycloalkyl-C₁₋₃ alkylene, 4-10 membered heterocycloalkyl-C₁₋₃ alkylene, C₆₋₁₀ aryl-C₁₋₃ alkylene, and 5-10 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵¹;

each R^{e9} is independently selected from H, CN, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkylthio, C₁₋₆ alkylsulfonyl, C₁₋₆ alkylcarbonyl, C₁₋₆ alkylaminosulfonyl, carbamyl, C₁₋₆ alkylcarbamyl, di(C₁₋₆ alkyl)carbamyl, aminosulfonyl, C₁₋₆ alkylaminosulfonyl and di(C₁₋₆ alkyl)aminosulfonyl;

each R^{a10}, R^{c10} and R^{d10} is independently selected from H, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₆ cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C₃₋₆ cycloalkyl-C₁₋₃ alkylene, 4-7 membered heterocycloalkyl-C₁₋₃ alkylene, phenyl-C₁₋₃ alkylene, and 5-6 membered heteroaryl-C₁₋₃ alkylene; wherein said C₁₋₆ alkyl C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₆ cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C₃₋₆ cycloalkyl-C₁₋₃ alkylene, 4-7 membered heterocycloalkyl-C₁₋₃ alkylene, phenyl-C₁₋₃ alkylene, and 5-6 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵²;

or any R^{c10} and R^{d10} attached to the same N atom, together with the N atom to which they are attached, form a 4-, 5-, 6- or 7-membered heterocycloalkyl group optionally substituted with 1, 2 or 3 substituents independently selected from R⁵²;

each R^{b10} is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₆ cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C₃₋₆ cycloalkyl-C₁₋₃ alkylene, 4-7 membered heterocycloalkyl-C₁₋₃ alkylene, phenyl-C₁₋₃ alkylene,

and 5-6 membered heteroaryl-C₁₋₃ alkylene; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₆ cycloalkyl, phenyl, 5-6 membered heteroaryl, 4-7 membered heterocycloalkyl, C₃₋₆ cycloalkyl-C₁₋₃ alkylene, 4-7 membered heterocycloalkyl-C₁₋₃ alkylene, phenyl-C₁₋₃ alkylene, and 5-6 membered heteroaryl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵²;

each R^{a11}, R^{c11} and R^{d11} is independently selected from H, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl and C₁₋₆ haloalkyl; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl and C₂₋₆ alkynyl are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^g;

or any R^{c11} and R^{d11} attached to the same N atom, together with the N atom to which they are attached, form a 4-, 5-, 6- or 7-membered heterocycloalkyl group optionally substituted with 1, 2 or 3 substituents independently selected from R^g;

each R^{b11} is independently selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, and C₁₋₆ haloalkyl; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl and C₂₋₆ alkynyl are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^g; and

each R^g is independently selected from OH, NO₂, CN, halo, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, C₃₋₆ cycloalkyl, C₃₋₆ cycloalkyl-C₁₋₂ alkylene, C₁₋₆ alkoxy, C₁₋₆ haloalkoxy, C₁₋₃ alkoxy-C₁₋₃ alkyl, C₁₋₃ alkoxy-C₁₋₃ alkoxy, HO-C₁₋₃ alkoxy, HO-C₁₋₃ alkyl, cyano-C₁₋₃ alkyl, H₂N-C₁₋₃ alkyl, amino, C₁₋₆ alkylamino, di(C₁₋₆ alkyl)amino, thio, C₁₋₆ alkylthio, C₁₋₆ alkylsulfinyl, C₁₋₆ alkylsulfonyl, carbamyl, C₁₋₆ alkylcarbamyl, di(C₁₋₆ alkyl)carbamyl, carboxy, C₁₋₆ alkylcarbonyl, C₁₋₆ alkoxy carbonyl, C₁₋₆ alkylcarbonylamino, C₁₋₆ alkylsulfonylamino, aminosulfonyl, C₁₋₆ alkylaminosulfonyl, di(C₁₋₆ alkyl)aminosulfonyl, aminosulfonylamino, C₁₋₆ alkylaminosulfonylamino, di(C₁₋₆ alkyl)aminosulfonylamino, aminocarbonylamino, C₁₋₆ alkylaminocarbonylamino, and di(C₁₋₆ alkyl)aminocarbonylamino.

2. The compound of claim 1, wherein R¹ is selected from C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ haloalkyl, CN, C(O)R^b, C(O)NR^cR^d, and C(O)OR^a; wherein said C₁₋₆ alkyl, C₂₋₆ alkenyl and C₂₋₆ alkynyl are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹⁰.

3. The compound of claim 1, wherein R^1 is selected from C_{1-6} alkyl, CN, $C(O)NR^cR^d$, $C(O)R^b$ and $C(O)OR^a$; wherein said C_{1-6} alkyl is optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{10} .

4. The compound of claim 1, wherein R^1 is selected from methyl, methoxycarbonyl, carbamoyl, cyano, hydroxymethyl, methoxymethyl, N-(4-hydroxy-4-methylcyclohexyl)carbamoyl, and 4-ethoxycarbonyl-piperazin-1-ylcarbonyl.

5. The compound of claim 1, wherein each R^{10} is selected from C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{1-6} haloalkyl, C_{3-10} cycloalkyl, 4-10 membered heterocycloalkyl, C_{6-10} aryl, 5-10 membered heteroaryl, halo, D, CN, OR^{a1} , $C(O)OR^{a1}$, $NR^{c1}R^{d1}$, and $S(O)_2NR^{c1}R^{d1}$; wherein said C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-10} cycloalkyl, 4-10 membered heterocycloalkyl, C_{6-10} aryl, and 5-10 membered heteroaryl are each optionally substituted with 1 or 2 substituents independently selected from R^{11} .

6. The compound of claim 1, wherein each R^{10} is selected from C_{1-6} alkyl, C_{1-6} haloalkyl, halo, D, CN, OR^{a1} , $C(O)R^{b1}$, $C(O)NR^{c1}R^{d1}$, $C(O)OR^{a1}$, $NR^{c1}R^{d1}$, and $S(O)_2NR^{c1}R^{d1}$; wherein said C_{1-6} alkyl is optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{11} .

7. The compound of claim 1, wherein each R^{10} is selected from C_{1-6} alkyl, OR^{a1} , and $C(O)OR^{a1}$; wherein said C_{1-6} alkyl is optionally substituted with 1 or 2 substituents independently selected from R^{11} .

8. The compound of claim 1, wherein each R^{10} is selected from methyl, OH, methoxy, and ethoxycarbonyl.

9. The compound of claim 1, wherein R^2 is 5-6 membered heteroaryl; wherein the 5-6 membered heteroaryl has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein the N and S are optionally oxidized; wherein a ring-forming carbon atom of the 5-6 membered heteroaryl is optionally

substituted by oxo to form a carbonyl group; and wherein the 5-6 membered heteroaryl is optionally substituted with 1, 2, 3, 4 or 5 substituents independently selected from R^{20} .

10. The compound of claim 1, wherein R^2 is selected from phenyl and pyrazolyl; wherein the phenyl and pyrazolyl are each optionally substituted with 1 or 2 substituents independently selected from R^{20} .

11. The compound of claim 1, wherein R^2 is phenyl, optionally substituted with 1, 2, 3, 4 or 5 substituents independently selected from R^{20} .

12. The compound of claim 1, wherein R^2 is pyrazole, optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{20} .

13. The compound of claim 1, wherein each R^{20} is independently selected from C_{1-6} alkyl, C_{1-6} haloalkyl, C_{3-6} cycloalkyl, 4-6 membered heterocycloalkyl, phenyl, 5-6 membered heteroaryl, C_{3-6} cycloalkyl- C_{1-3} alkylene, 4-6 membered heterocycloalkyl- C_{1-3} alkylene, phenyl- C_{1-3} alkylene, 5-6 membered heteroaryl- C_{1-3} alkylene, halo, D, CN, OR^{a2} , $C(O)R^{b2}$, $C(O)NR^{c2}R^{d2}$, $C(O)OR^{a2}$, $NR^{c2}R^{d2}$, $S(O)_2R^{b2}$, and $S(O)_2NR^{c2}R^{d2}$; wherein a ring-forming carbon atom of the 4-6 membered heterocycloalkyl is optionally substituted by oxo to form a carbonyl group; wherein said C_{1-6} alkyl, C_{3-6} cycloalkyl, 4-6 membered heterocycloalkyl, phenyl, 5-6 membered heteroaryl, C_{3-6} cycloalkyl- C_{1-3} alkylene, 4-6 membered heterocycloalkyl- C_{1-3} alkylene, phenyl- C_{1-3} alkylene, and 5-6 membered heteroaryl- C_{1-3} alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{21} .

14. The compound of claim 1, wherein each R^{20} is independently selected from C_{1-6} alkyl, C_{3-6} cycloalkyl, 4-6 membered heterocycloalkyl, 4-6 membered heterocycloalkyl- C_{1-3} alkylene, halo, $NR^{c2}R^{d2}$, and $C(O)NR^{c2}R^{d2}$, wherein a ring-forming carbon atom of the 4-6 membered heterocycloalkyl is optionally substituted by oxo to form a carbonyl group; wherein said C_{1-6} alkyl, C_{3-6} cycloalkyl, 4-6 membered heterocycloalkyl, and 4-6 membered heterocycloalkyl- C_{1-3} alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{21} .

15. The compound of claim 1, wherein each R^{21} is independently selected from C_{1-6} alkyl, C_{1-6} haloalkyl, C_{3-6} cycloalkyl, 4-6 membered heterocycloalkyl, halo, D, CN, OR^{a4} , $C(O)NR^{c4}R^{d4}$ and $NR^{c4}R^{d4}$; wherein said C_{1-6} alkyl, C_{3-6} cycloalkyl, and 4-6 membered heterocycloalkyl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{22} .

16. The compound of claim 1, wherein each R^{21} is independently selected from C_{1-6} alkyl, C_{3-6} cycloalkyl, 4-6 membered heterocycloalkyl, halo, OR^{a4} , and $NR^{c4}R^{d4}$; wherein said C_{1-6} alkyl, C_{3-6} cycloalkyl, and 4-6 membered heterocycloalkyl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{22} .

17. The compound of claim 1, wherein each R^{22} is independently selected from C_{1-6} alkyl, C_{1-6} haloalkyl, halo, D, CN, OR^{a6} , and $NR^{c6}R^{d6}$; wherein said C_{1-6} alkyl, is optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^g .

18. The compound of claim 1, wherein each R^{22} is independently selected from C_{1-6} alkyl, halo and OR^{a6} ; wherein said C_{1-6} alkyl, is optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^g .

19. The compound of claim 1, wherein R^{22} is OH, F or methyl.

20. The compound of claim 1, wherein R^{21} is selected from methyl, F, OH, dimethylamino, hydroxyethyl, piperazinyl, piperidinyl, methylpyrrolidinyl, azetidiny, morpholino, 4-hydroxypiperidin-1-yl, 4-hydroxy-4-methylpiperidin-1-yl, 3-hydroxy-3-methylazetidin-1-yl, 4-methylpiperazin-1-yl, 3,3-difluoroazetidin-1-yl, 2-methylmorpholino, 2-(hydroxymethyl)morpholino, 3-hydroxy-3-methylpyrrolidin-1-yl, and pyrrolidin-1-yl.

21. The compound of claim 1, wherein R^{20} is selected from fluoro, piperazin-1-yl, 4-(2-hydroxyethyl)piperazin-1-yl, 4-methyl-2-oxopiperazin-1-yl, 4-methylpiperazin-1-yl, piperazin-1-ylcarbonyl, 4-methylpiperazin-1-ylcarbonyl, (2-methylpyrrolidin-1-yl)methyl, piperidin-4-yl, tetrahydro-2H-pyran-4-yl, 4-hydroxycyclohexyl, piperidin-4-ylmethyl, (4-hydroxypiperidin-1-yl)methyl, (4-hydroxy-4-methylpiperidin-1-yl)methyl, (3-hydroxy-3-

methylazetidin-1-yl)methyl, (4-methylpiperazin-1-yl)methyl, azetidin-1-ylmethyl, (3,3-difluoroazetidin-1-yl)methyl, methyl, ethyl, isopropyl, dimethylcarbamoyl, morpholinomethyl, (2-methylmorpholino)methyl, (2-(hydroxymethyl)morpholino)methyl, pyrrolidin-1-ylmethyl, (3-hydroxy-3-methylpyrrolidin-1-yl)methyl, and (dimethylamino)methyl.

22. The compound of claim 1, wherein R² is selected from 4-(piperazin-1-yl)phenyl, 4-(4-(2-hydroxyethyl)piperazin-1-yl)phenyl, 4-(4-methyl-2-oxopiperazin-1-yl)phenyl, 3-(4-methylpiperazin-1-yl)phenyl, 4-(4-methylpiperazin-1-ylcarbonyl)phenyl, 4-(piperazin-1-ylcarbonyl)phenyl, 3-fluoro-4-((2-methylpyrrolidin-1-yl)methyl)phenyl, 1-(tetrahydro-2H-pyran-4-yl)-1H-pyrazol-4-yl, (piperidin-4-ylmethyl)-1H-pyrazol-4-yl, (piperidin-4-yl)-1H-pyrazol-4-yl, 1-(4-hydroxycyclohexyl)-1H-pyrazol-4-yl, 4-(azetidin-1-ylmethyl)phenyl, 1-ethyl-1H-pyrazol-4-yl, 1-isopropyl-1H-pyrazol-4-yl, 4-(dimethylcarbamoyl)phenyl, 4-(pyrrolidin-1-ylmethyl)phenyl, 4-(morpholinomethyl)phenyl, 4-((3,3-difluoroazetidin-1-yl)methyl)phenyl, 4-((2-methylmorpholino)methyl)phenyl, 4-((2-(hydroxymethyl)morpholino)methyl)phenyl, 4-((3-hydroxy-3-methylpyrrolidin-1-yl)methyl)phenyl, 4-((4-hydroxypiperidin-1-yl)methyl)phenyl, 4-((4-hydroxy-4-methylpiperidin-1-yl)methyl)phenyl, 4-((3-hydroxy-3-methylazetidin-1-yl)methyl)phenyl, 4-((4-methylpiperazin-1-yl)methyl)phenyl, 4-((4-hydroxypiperidin-1-yl)methyl)phenyl and 4-((dimethylamino)methyl)phenyl.

23. The compound of claim 1, wherein R⁵ is C₆₋₁₀ aryl, optionally substituted with 1, 2, 3, 4 or 5 substituents independently selected from R⁵⁰.

24. The compound of claim 1, wherein R⁵ is a 5-10 membered heteroaryl; wherein the 5-10 membered heteroaryl has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein the N and S are optionally oxidized; wherein a ring-forming carbon atom of the 5-10 membered heteroaryl is optionally substituted by oxo to form a carbonyl group; and wherein the 5-10 membered heteroaryl is optionally substituted with 1, 2, 3, 4 or 5 substituents independently selected from R⁵⁰.

25. The compound of claim 1, wherein R^{50} is selected from quinolinyl, naphthyridinyl, pyridinyl, and phenyl, wherein the quinolinyl, naphthyridinyl, pyridinyl, and phenyl are each optionally substituted with 1, 2, or 3 substituents independently selected from R^{50} .

26. The compound of claim 1, wherein each R^{50} is independently selected from C_{1-6} alkyl, C_{1-6} haloalkyl, C_{3-10} cycloalkyl, 4-10 membered heterocycloalkyl, C_{6-10} aryl, 5-10 membered heteroaryl, halo, D, CN, OR^{a9} , $C(O)R^{b9}$, $C(O)NR^{c9}R^{d9}$, $C(O)OR^{a9}$, $NR^{c9}R^{d9}$, $S(O)_2R^{b9}$, and $S(O)_2NR^{c9}R^{d9}$; wherein said C_{1-6} alkyl, C_{3-10} cycloalkyl, 4-10 membered heterocycloalkyl, C_{6-10} aryl, and 5-10 membered heteroaryl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{51} ; and wherein a ring-forming carbon atom of said 4-10 membered heterocycloalkyl is optionally oxidized to form a carbonyl group.

27. The compound of claim 1, wherein each R^{50} is independently selected from C_{1-6} alkyl, 4-10 membered heterocycloalkyl, 5-10 membered heteroaryl, halo, CN, $C(O)R^{b9}$, $C(O)NR^{c9}R^{d9}$, and $NR^{c9}R^{d9}$; wherein said C_{1-6} alkyl, 4-10 membered heterocycloalkyl, and 5-10 membered heteroaryl, are each optionally substituted with 1, 2 or 3 substituents independently selected from R^{51} ; and wherein a ring-forming carbon atom of said 4-10 membered heterocycloalkyl is optionally oxidized to form a carbonyl group.

28. The compound of claim 1, wherein each R^{50} is independently selected from fluoro, hydroxyethyl, cyano, carbamoyl, methylcarbamoyl, pyridinyl, morpholino, morpholinomethyl, pyrazolyl, 6-oxaspiro[3.4]octanyl, pyridinylamino, benzyl, piperazinyl, piperazin-1-ylcarbonyl, pyrimidinyl, pyrazinyl, (2-hydroxyethyl)carbamoyl, hexahydropyrrolo[1,2-a]pyrazinyl, 2,5-diazabicyclo[2.2.1]heptanyl, triazolyl, imidazolyl, and pyrazinyl, wherein the methylcarbamoyl, pyridinyl, morpholino, morpholinomethyl, pyrazolyl, 6-oxaspiro[3.4]octanyl, pyridinylamino, benzyl, piperazinyl, piperazin-1-ylcarbonyl, pyrimidinyl, pyrazinyl, (2-hydroxyethyl)carbamoyl, hexahydropyrrolo[1,2-a]pyrazinyl, 2,5-diazabicyclo[2.2.1]heptanyl, triazolyl, imidazolyl, and pyrazinyl are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{51} ; or

two adjacent R^{50} substituents, taken together with the atoms to which they are attached, to form a fused 5-or 6-membered heterocycloalkyl ring; wherein the fused 5-or 6-membered

heterocycloalkyl ring each has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein a ring-forming carbon atom of each fused 5-or 6-membered heterocycloalkyl ring is optionally substituted by oxo to form a carbonyl group; and wherein the fused 5-or 6-membered heterocycloalkyl ring is optionally substituted with 1, 2, 3 or 4 substituents independently selected from R⁵¹.

29. The compound of claim 1, wherein R⁵ is substituted with at least two adjacent R⁵⁰ substituents, taken together with the atoms to which they are attached, to form a fused 5-or 6-membered heterocycloalkyl ring; wherein the fused 5-or 6-membered heterocycloalkyl ring each has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein a ring-forming carbon atom of each fused 5-or 6-membered heterocycloalkyl ring is optionally substituted by oxo to form a carbonyl group; and wherein the fused 5-or 6-membered heterocycloalkyl ring is optionally substituted with 1, 2, 3 or 4 substituents independently selected from R⁵¹.

30. The compound of claim 1, wherein each R⁵¹ is independently selected from C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, halo, D, CN, OR^{a10}, C(O)R^{b10}, C(O)NR^{c10}R^{d10}, C(O)OR^{a10}, NR^{c10}R^{d10}, S(O)₂R^{b10}, and S(O)₂NR^{c10}R^{d10}; wherein said C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, and 5-10 membered heteroaryl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵².

31. The compound of claim 1, wherein each R⁵¹ is independently selected from C₁₋₆ alkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, OR^{a10}, and C(O)R^{b10}; wherein said C₁₋₆ alkyl, 4-10 membered heterocycloalkyl, and C₆₋₁₀ aryl are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵².

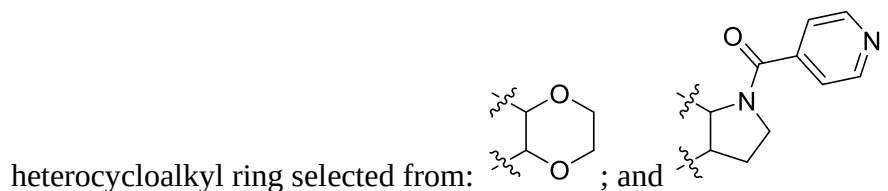
32. The compound of claim 1, wherein each R⁵² is independently selected from C₁₋₆ alkyl, C₁₋₆ haloalkyl, halo, D, CN, OR^{a11}, and NR^{c11}R^{d11}.

33. The compound of claim 1, wherein each R⁵² is independently selected from halo, and OR^{a11}.

34. The compound of claim 1, wherein each R⁵¹ is selected from methyl, OH, hydroxymethyl, hydroxyethyl, acetyl, 4-morpholino, 4-methylpiperazin-1-yl, pyridin-3-yl, 3,5-difluorophenyl, and pyridin-4-yl-carbonyl.

35. The compound of claim 1, wherein R⁵⁰ is independently selected from fluoro, hydroxyethyl, cyano, carbamoyl, methylcarbamoyl, pyridin-4-yl, 3-hydroxymethylpyridin-4-yl, 4-morpholino, 4-morpholinomethyl, 1-methyl-1H-pyrazol-3-yl, 6-oxaspiro[3.4]octan-2-yl, pyridin-3-ylamino, (3,5-difluorophenyl)(hydroxyl)methyl, 4-acetylpiperazin-1-yl, 4-methylpiperazin-1-ylcarbonyl, (2-hydroxyethyl)carbamoyl, 6-oxohexahydropyrrolo[1,2-a]pyrazin-2(1H)-yl, 5-acetyl-2,5-diazabicyclo[2.2.1]heptan-2-yl, pyridin-2-yl, pyrazin-2-yl, pyrimidin-2-yl, 1-methyl-1H-pyrazol-3-yl, 5-methyl-1H-pyrazol-3-yl, 1-methyl-1H-pyrazol-4-yl, 1-methyl-1H-imidazol-4-yl, 1-ethyl-1H-imidazol-4-yl, and 4-methyl-2H-1,2,3-triazol-2-yl.

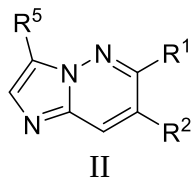
36. The compound of claim 1, wherein R⁵ is substituted with at least two adjacent R⁵⁰ substituents, taken together with the atoms to which they are attached, to form a fused



37. The compound of claim 1, wherein R⁵ is selected from 1,8-naphthyridin-4-yl, quinolin-4-yl, 7-(hydroxymethyl)quinolin-4-yl, 7-(pyridin-4-yl)quinolin-4-yl, 7-(2-(hydroxymethyl)pyridin-4-yl)quinolin-4-yl, 7-morpholinoquinolin-4-yl, 7-(1-methyl-1H-pyrazol-3-yl)quinolin-4-yl, 7-(6-oxa-2-azaspiro[3.4]octan-2-yl)quinolin-4-yl, 7-(methylcarbamoyl)quinolin-4-yl, 7-(pyridin-3-ylamino)quinolin-4-yl, 7-((3,5-difluorophenyl)(hydroxy)methyl)quinolin-4-yl, 7-(4-acetylpiperazin-1-yl)quinolin-4-yl, 7-(4-methylpiperazin-1-ylcarbonyl)quinolin-4-yl, 7-(morpholinomethyl)quinolin-4-yl, 7-((2-hydroxyethyl)carbamoyl)quinolin-4-yl, 7-cyanoquinolin-4-yl, 7-(6-oxohexahydropyrrolo[1,2-a]pyrazin-2(1H)-yl)quinolin-4-yl, 7-(5-acetyl-2,5-diazabicyclo[2.2.1]heptan-2-yl)quinolin-4-yl, 8-cyanoquinolin-5-yl, 2,3-dihydro-[1,4]dioxino[2,3-b]pyridin-8-yl, 1-isonicotinoyl-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-4-yl, 4-carbamoyl-3-fluorophenyl, 7-(pyridin-2-yl)-1,8-naphthyridin-4-

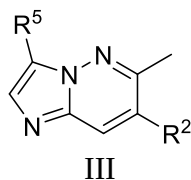
yl, 7-(pyrimidin-2-yl)-1,8-naphthyridin-4-yl, 7-(pyrazin-2-yl)-1,8-naphthyridin-4-yl, 7-(1-methyl-1H-pyrazol-3-yl)-1,8-naphthyridin-4-yl, 7-(5-methyl-1H-pyrazol-3-yl)-1,8-naphthyridin-4-yl, 7-(1-methyl-1H-pyrazol-4-yl)-1,8-naphthyridin-4-yl, 7-(1-methyl-1H-imidazol-4-yl)-1,8-naphthyridin-4-yl, 7-(1-ethyl-1H-imidazol-4-yl)-1,8-naphthyridin-4-yl, and 7-(4-methyl-2H-1,2,3-triazol-2-yl)-1,8-naphthyridin-4-yl.

38. The compound of claim 1, wherein the compound is a compound of Formula II:



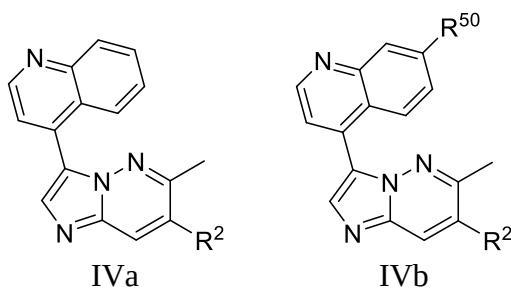
or a pharmaceutically acceptable salt thereof.

39. The compound of claim 1, wherein the compound is a compound of Formula III:



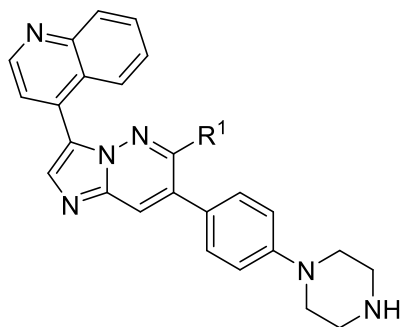
or a pharmaceutically acceptable salt thereof.

40. The compound of claim 1, wherein the compound is a compound of Formula IVa or Formula IVb:

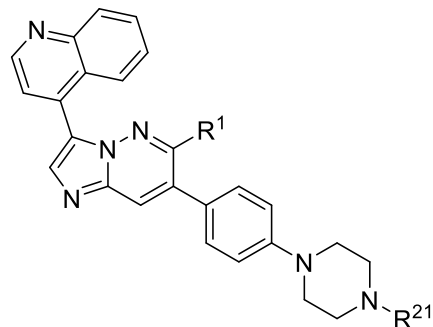


or a pharmaceutically acceptable salt thereof.

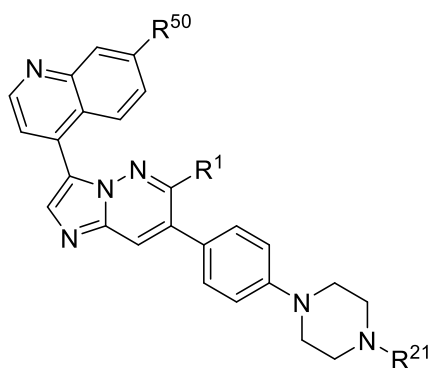
41. The compound of claim 1, wherein the compound is a compound of Formula Va, Formula Vb or Formula Vc:



Va



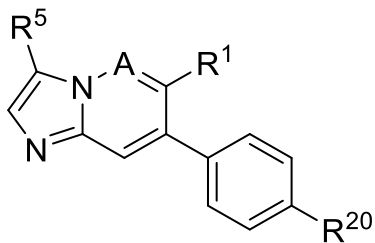
Vb



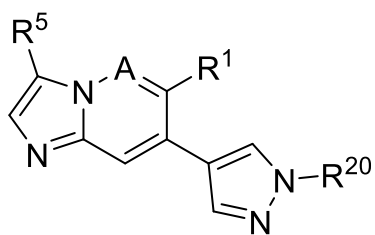
Vc

or a pharmaceutically acceptable salt thereof.

42. The compound of claim 1, wherein the compound is a compound of Formula VIa or Formula VIb:



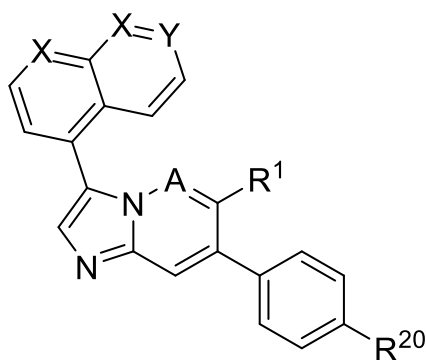
VIa



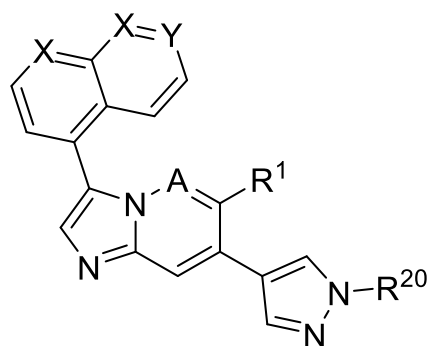
VIb

or a pharmaceutically acceptable salt thereof.

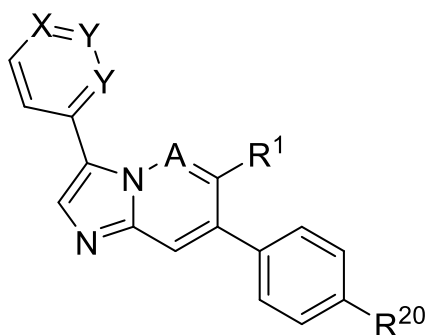
43. The compound of claim 1, wherein the compound is a compound of Formula VIIa, Formula VIIb, Formula VIIc or Formula VIId:



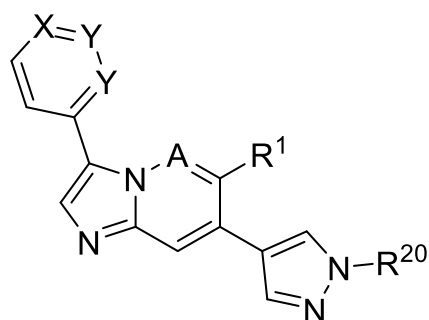
VIIa



VIIb



VIIc



VIId

or a pharmaceutically acceptable salt thereof, wherein:

each X is independently selected from CH, N and CR⁵⁰; and

each Y is independently selected from CH and CR⁵⁰.

44. The compound of claim 1, wherein:

R¹ is selected from C₁₋₆ alkyl, C₁₋₆ haloalkyl, CN, C(O)R^b, C(O)NR^cR^d, and C(O)OR^a; wherein said C₁₋₆ alkyl, is optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹⁰;

R² is selected from C₆₋₁₀ aryl and 5-10 membered heteroaryl; wherein the 5-10 membered heteroaryl has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein the N and S are optionally oxidized; wherein a ring-forming carbon atom of the 5-10 membered heteroaryl is optionally substituted by oxo to form a carbonyl group; and wherein the C₆₋₁₀ aryl and 5-10 membered heteroaryl are each optionally substituted with 1, 2, 3, 4 or 5 substituents independently selected from R²⁰;

R³ is selected from H and C₁₋₆ alkyl;

R⁴ is selected from H and C₁₋₆ alkyl;

R^5 is selected from C_{6-10} aryl and 5-10 membered heteroaryl; wherein the 5-10 membered heteroaryl has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein the N and S are optionally oxidized; wherein a ring-forming carbon atom of the 5-10 membered heteroaryl is optionally substituted by oxo to form a carbonyl group; and wherein the C_{6-10} aryl and 5-10 membered heteroaryl are each optionally substituted with 1, 2, 3, 4 or 5 substituents independently selected from R^{50} ;

or two adjacent R^{50} substituents on R^5 , taken together with the atoms to which they are attached, form a fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring, or a fused C_{3-7} cycloalkyl ring; wherein the fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring each has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein a ring-forming carbon atom of each fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring is optionally substituted by oxo to form a carbonyl group; and wherein the fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring and fused C_{3-7} cycloalkyl ring are each optionally substituted with 1, 2, 3 or 4 substituents independently selected from R^{51} ;

A is N;

each R^{10} is independently selected from C_{1-6} alkyl, C_{1-6} haloalkyl, halo, D, CN, OR^{a1} , $C(O)R^{b1}$, $C(O)NR^{c1}R^{d1}$, $C(O)OR^{a1}$, $NR^{c1}R^{d1}$, and $S(O)_2NR^{c1}R^{d1}$; wherein said C_{1-6} alkyl is optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{11} ;

each R^{20} is independently selected from C_{1-6} alkyl, C_{1-6} haloalkyl, C_{3-6} cycloalkyl, 4-6 membered heterocycloalkyl, phenyl, 5-6 membered heteroaryl, C_{3-6} cycloalkyl- C_{1-3} alkylene, 4-6 membered heterocycloalkyl- C_{1-3} alkylene, phenyl- C_{1-3} alkylene, 5-6 membered heteroaryl- C_{1-3} alkylene, halo, D, CN, OR^{a2} , $C(O)R^{b2}$, $C(O)NR^{c2}R^{d2}$, $C(O)OR^{a2}$, $NR^{c2}R^{d2}$, $S(O)_2R^{b2}$, and $S(O)_2NR^{c2}R^{d2}$; wherein a ring-forming carbon atom of the 4-6 membered heterocycloalkyl is optionally substituted by oxo to form a carbonyl group; wherein said C_{1-6} alkyl, C_{3-6} cycloalkyl, 4-6 membered heterocycloalkyl, phenyl, 5-6 membered heteroaryl, C_{3-6} cycloalkyl- C_{1-3} alkylene, 4-6 membered heterocycloalkyl- C_{1-3} alkylene, phenyl- C_{1-3} alkylene, and 5-6 membered heteroaryl- C_{1-3} alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^{21} ;

each R^{21} is independently selected from C_{1-6} alkyl, C_{1-6} haloalkyl, C_{3-6} cycloalkyl, 4-6 membered heterocycloalkyl, halo, D, CN, OR^{a4} , $C(O)NR^{c4}R^{d4}$ and $NR^{c4}R^{d4}$; wherein said C_{1-6}

alkyl, C₃₋₆ cycloalkyl, and 4-6 membered heterocycloalkyl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R²²;

each R²² is independently selected from C₁₋₆ alkyl, C₁₋₆ haloalkyl, halo, D, CN, OR^{a6}, and NR^{c6}R^{d6}; wherein said C₁₋₆ alkyl, is optionally substituted with 1, 2, 3, or 4 substituents independently selected from R^g;

each R⁵⁰ is independently selected from C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, halo, D, CN, OR^{a9}, C(O)R^{b9}, C(O)NR^{c9}R^{d9}, C(O)OR^{a9}, NR^{c9}R^{d9}, S(O)₂R^{b9}, and S(O)₂NR^{c9}R^{d9}; wherein said C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, and 5-10 membered heteroaryl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵¹;

each R⁵¹ is independently selected from C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, 5-10 membered heteroaryl, halo, D, CN, OR^{a10}, C(O)R^{b10}, C(O)NR^{c10}R^{d10}, C(O)OR^{a10}, NR^{c10}R^{d10}, S(O)₂R^{b10}, and S(O)₂NR^{c10}R^{d10}; wherein said C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, and 5-10 membered heteroaryl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵²;

each R⁵² is independently selected from C₁₋₆ alkyl, C₁₋₆ haloalkyl, halo, D, CN, OR^{a11}, and NR^{c11}R^{d11};

each R^a, R^c, and R^d is independently selected from H, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₃₋₁₀ cycloalkyl, and 4-10 membered heterocycloalkyl; wherein said C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl, and 4-10 membered heterocycloalkyl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹⁰;

or any R^c and R^d attached to the same N atom, together with the N atom to which they are attached, form a 4-10 membered heterocycloalkyl group optionally substituted with 1, 2, 3 or 4 substituents independently selected from R¹⁰;

each R^b is independently selected from C₁₋₆ alkyl, C₁₋₆ haloalkyl, and 4-10 membered heterocycloalkyl, wherein the 4-10 membered heterocycloalkyl is optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹⁰;

each R^{a1}, R^{c1} and R^{d1} is independently selected from H and C₁₋₆ alkyl;

each R^{b1} is independently selected from C₁₋₆ alkyl, and C₁₋₆ haloalkyl;

each R^{a2}, R^{c2} and R^{d2} is independently selected from H, C₁₋₆ alkyl, and C₁₋₆ haloalkyl;

or any R^{c2} and R^{d2} attached to the same N atom, together with the N atom to which they are attached, form a 4-10 membered heterocycloalkyl group optionally substituted with 1, 2, 3 or 4 substituents independently selected from R²¹;

each R^{b2} is independently selected from C₁₋₆ alkyl, and C₁₋₆ haloalkyl;

each R^{a4}, R^{c4} and R^{d4} is independently selected from H and C₁₋₆ alkyl;

each R^{b4} is independently selected from C₁₋₆ alkyl, and C₁₋₆ haloalkyl;

each R^{a6}, R^{c6} and R^{d6} is independently selected from H and C₁₋₆ alkyl;

each R^{a9}, R^{c9} and R^{d9} is independently selected from H, C₁₋₆ alkyl, C₁₋₆ haloalkyl, 4-10 membered heterocycloalkyl, and 5-10 membered heteroaryl; wherein said C₁₋₆ alkyl, 4-10 membered heterocycloalkyl, and 5-10 membered heteroaryl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵¹;

or any R^{c9} and R^{d9} attached to the same N atom, together with the N atom to which they are attached, form a 4-10 membered heterocycloalkyl group optionally substituted with 1, 2, 3 or 4 substituents independently selected from R⁵¹;

each R^{b9} is independently selected from C₁₋₆ alkyl, and C₁₋₆ haloalkyl;

each R^{a10}, R^{c10} and R^{d10} is independently selected from H and C₁₋₆ alkyl;

each R^{b10} is independently selected from C₁₋₆ alkyl, C₁₋₆ haloalkyl, 5-6 membered heteroaryl, and 4-7 membered heterocycloalkyl; wherein said C₁₋₆ alkyl 5-6 membered heteroaryl, and 4-7 membered heterocycloalkyl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵²; and

each R^{a11}, R^{c11} and R^{d11} is independently selected from H and C₁₋₆ alkyl; and

each R^g is independently selected from OH, CN, halo, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy, C₁₋₆ haloalkoxy, amino, C₁₋₆ alkylamino and di(C₁₋₆ alkyl)amino.

45. The compound of claim 1, wherein:

R¹ is selected from C₁₋₆ alkyl, CN, C(O)NR^cR^d, C(O)R^b and C(O)OR^a; wherein said C₁₋₆ alkyl, is optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹⁰;

R² is selected from phenyl and 5-6 membered heteroaryl; wherein the 5-6 membered heteroaryl has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein the N and S are optionally oxidized; wherein a ring-forming carbon atom of the 5-6 membered heteroaryl is optionally substituted by oxo to

form a carbonyl group; and wherein the phenyl and 5-6 membered heteroaryl are each optionally substituted with 1, 2, 3, 4 or 5 substituents independently selected from R²⁰;

R³ is H;

R⁴ is H;

R⁵ is selected from C₆₋₁₀ aryl and 5-10 membered heteroaryl; wherein the 5-10 membered heteroaryl has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein the N and S are optionally oxidized; wherein a ring-forming carbon atom of the 5-10 membered heteroaryl is optionally substituted by oxo to form a carbonyl group; and wherein the C₆₋₁₀ aryl and 5-10 membered heteroaryl are each optionally substituted with 1, 2, 3, 4 or 5 substituents independently selected from R⁵⁰;

or two adjacent R⁵⁰ substituents on R⁵, taken together with the atoms to which they are attached, form a fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring; wherein the fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring each has at least one ring-forming carbon atom and 1, 2, 3, or 4 ring-forming heteroatoms independently selected from N, O, and S; wherein a ring-forming carbon atom of each fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring is optionally substituted by oxo to form a carbonyl group; and wherein the fused 4-, 5-, 6- or 7-membered heterocycloalkyl ring and fused C₃₋₇ cycloalkyl ring are each optionally substituted with 1, 2, 3 or 4 substituents independently selected from R⁵¹;

A is N;

each R¹⁰ is independently selected from C₁₋₆ alkyl, OR^{a1}, and C(O)OR^{a1}; wherein said C₁₋₆ alkyl is optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹¹;

each R²⁰ is independently selected from C₁₋₆ alkyl, C₃₋₆ cycloalkyl, 4-6 membered heterocycloalkyl, 4-6 membered heterocycloalkyl-C₁₋₃ alkylene, halo, NR^{c2}R^{d2}, and C(O)NR^{c2}R^{d2}, wherein a ring-forming carbon atom of the 4-6 membered heterocycloalkyl is optionally substituted by oxo to form a carbonyl group; wherein said C₁₋₆ alkyl, C₃₋₆ cycloalkyl, 4-6 membered heterocycloalkyl and 4-6 membered heterocycloalkyl-C₁₋₃ alkylene are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R²¹;

each R²¹ is independently selected from C₁₋₆ alkyl, C₃₋₆ cycloalkyl, 4-6 membered heterocycloalkyl, halo, OR^{a4}, and NR^{c4}R^{d4}; wherein said C₁₋₆ alkyl, C₃₋₆ cycloalkyl, and 4-6 membered heterocycloalkyl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R²²;

each R²² is independently selected from C₁₋₆ alkyl, halo, and OH;

each R⁵⁰ is independently selected from C₁₋₆ alkyl, 4-10 membered heterocycloalkyl, 5-10 membered heteroaryl, halo, CN, C(O)NR^{c9}R^{d9}, and NR^{c9}R^{d9}; wherein said C₁₋₆ alkyl, 4-10 membered heterocycloalkyl, and 5-10 membered heteroaryl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵¹;

each R⁵¹ is independently selected from C₁₋₆ alkyl, 4-10 membered heterocycloalkyl, C₆₋₁₀ aryl, OH, and C(O)R^{b10}; wherein said C₁₋₆ alkyl, 4-10 membered heterocycloalkyl, and C₆₋₁₀ aryl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵²;

each R⁵² is independently selected from halo, and OH;

each R^a, R^c, and R^d is independently selected from H, C₁₋₆ alkyl, and C₃₋₁₀ cycloalkyl; wherein said C₁₋₆ alkyl, and C₃₋₁₀ cycloalkyl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹⁰;

or any R^c and R^d attached to the same N atom, together with the N atom to which they are attached, form a 4-10 membered heterocycloalkyl group optionally substituted with 1, 2, 3 or 4 substituents independently selected from R¹⁰;

each R^b is independently selected from C₁₋₆ alkyl, C₁₋₆ haloalkyl, and 4-10 membered heterocycloalkyl, wherein the 4-10 membered heterocycloalkyl is optionally substituted with 1, 2, 3, or 4 substituents independently selected from R¹⁰;

each R^{a1} is independently selected from H and C₁₋₆ alkyl;

each R^{a2}, R^{c2} and R^{d2} is independently selected from H, C₁₋₆ alkyl, and C₁₋₆ haloalkyl;

or any R^{c2} and R^{d2} attached to the same N atom, together with the N atom to which they are attached, form a 4-10 membered heterocycloalkyl group optionally substituted with 1, 2, 3 or 4 substituents independently selected from R²¹;

each R^{a4}, R^{c4} and R^{d4} is independently selected from H, C₁₋₆ alkyl, and C₁₋₆ haloalkyl;

or any R^{c4} and R^{d4} attached to the same N atom, together with the N atom to which they are attached, form a 4-10 membered heterocycloalkyl group optionally substituted with 1, 2, 3 or 4 substituents independently selected from R²¹;

each R^{c9} and R^{d9} is independently selected from H, C₁₋₆ alkyl, and 5-10 membered heteroaryl; wherein said C₁₋₆ alkyl, and 5-10 membered heteroaryl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵¹;

or any R^{c9} and R^{d9} attached to the same N atom, together with the N atom to which they are attached, form a 4-10 membered heterocycloalkyl group optionally substituted with 1, 2, 3 or 4 substituents independently selected from R⁵¹;

each R^{b10} is independently selected from C₁₋₆ alkyl, and 5-6 membered heteroaryl; wherein said C₁₋₆ alkyl, and 5-6 membered heteroaryl, are each optionally substituted with 1, 2, 3, or 4 substituents independently selected from R⁵².

46. The compound of claim 1, wherein the compound is
4-(6-Methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinolone;
methyl 7-(4-(piperazin-1-yl)phenyl)-3-(quinolin-4-yl)imidazo[1,2-b]pyridazine-6-carboxylate;
N-((1R,4R)-4-Hydroxy-4-methylcyclohexyl)-7-(4-(piperazin-1-yl)phenyl)-3-(quinolin-4-yl)imidazo[1,2-b]pyridazine-6-carboxamide;
ethyl 4-(7-(4-(piperazin-1-yl)phenyl)-3-(quinolin-4-yl)imidazo[1,2-b]pyridazine-6-carbonyl)piperazine-1-carboxylate;
7-(4-(Piperazin-1-yl)phenyl)-3-(quinolin-4-yl)imidazo[1,2-b]pyridazine-6-carboxamide;
7-(4-(piperazin-1-yl)phenyl)-3-(quinolin-4-yl)imidazo[1,2-b]pyridazine-6-carbonitrile;
(7-(4-(Piperazin-1-yl)phenyl)-3-(quinolin-4-yl)imidazo[1,2-b]pyridazin-6-yl)methanol;
4-(6-(Methoxymethyl)-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinolone;
4-(6-Methyl-7-(1-(piperidin-4-ylmethyl)-1H-pyrazol-4-yl)imidazo[1,2-b]pyridazin-3-yl)-7-(pyridin-4-yl)quinolone;
(trans)-4-(4-(6-Methyl-3-(7-(pyridin-4-yl)quinolin-4-yl)imidazo[1,2-b]pyridazin-7-yl)-1H-pyrazol-1-yl)cyclohexan-1-ol;
2-(4-(4-(6-Methyl-3-(7-(pyridin-4-yl)quinolin-4-yl)imidazo[1,2-b]pyridazin-7-yl)phenyl)piperazin-1-yl)ethan-1-ol;
4-Methyl-1-(4-(6-methyl-3-(7-(pyridin-4-yl)quinolin-4-yl)imidazo[1,2-b]pyridazin-7-yl)phenyl)piperazin-2-one;
4-(6-Methyl-7-(3-(4-methylpiperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)-7-(pyridin-4-yl)quinolone;

(4-(6-Methyl-3-(7-(pyridin-4-yl)quinolin-4-yl)imidazo[1,2-b]pyridazin-7-yl)phenyl)(4-methylpiperazin-1-yl)methanone;

(R)-4-(7-(3-fluoro-4-((2-methylpyrrolidin-1-yl)methyl)phenyl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-7-(pyridin-4-yl)quinolone;

N-methyl-4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinoline-7-carboxamide;

(4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinolin-7-yl)(4-methylpiperazin-1-yl)methanone;

7-(1-methyl-1H-pyrazol-3-yl)-4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinolone;

(4-(4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinolin-7-yl)pyridin-2-yl)methanol;

4-(4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinolin-7-yl)morpholine;

2-(4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinolin-7-yl)-6-oxa-2-azaspiro[3.4]octane;

4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)-N-(pyridin-3-yl)quinolin-7-amine;

1-(4-(4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinolin-7-yl)piperazin-1-yl)ethan-1-one;

4-((4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinolin-7-yl)methyl)morpholine;

(3,5-difluorophenyl)(4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinolin-7-yl)methanol;

(4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinolin-7-yl)methanol;

4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)-1,8-naphthyridine;

5-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinoline-8-carbonitrile;

8-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)-2,3-dihydro-[1,4]dioxino[2,3-b]pyridine;

4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinoline-7-carbonitrile;

N-(2-hydroxyethyl)-4-(6-methyl-7-(4-(piperazin-1-yl)phenyl)imidazo[1,2-b]pyridazin-3-yl)quinoline-8-carboxamide;

(4-(6-methyl-7-(1-(tetrahydro-2H-pyran-4-yl)-1H-pyrazol-4-yl)imidazo[1,2-b]pyridazin-3-yl)-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-1-yl)(pyridin-4-yl)methanone;

1-((1S,4S)-5-(4-(7-(1-((1R,4R)-4-hydroxycyclohexyl)-1H-pyrazol-4-yl)-6-methylimidazo[1,2-b]pyridazin-3-yl)quinolin-7-yl)-2,5-diazabicyclo[2.2.1]heptan-2-yl)ethan-1-one;

2-(4-(7-(1-((1R,4R)-4-hydroxycyclohexyl)-1H-pyrazol-4-yl)-6-methylimidazo[1,2-b]pyridazin-3-yl)quinolin-7-yl)hexahydropyrrolo[1,2-a]pyrazin-6(2H)-one;

4-(6-methyl-7-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)imidazo[1,2-a]pyridin-3-yl)quinolone;
or

2-fluoro-4-(6-methyl-7-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)imidazo[1,2-a]pyridin-3-yl)benzamide;

or a pharmaceutically acceptable salt thereof.

47. The compound of claim 1, wherein the compound is

(1R,4R)-4-(4-(6-Methyl-3-(7-(pyridin-2-yl)-1,8-naphthyridin-4-yl)imidazo[1,2-b]pyridazin-7-yl)-1H-pyrazol-1-yl)cyclohexan-1-ol;

5-(7-(4-(Azetidin-1-ylmethyl)phenyl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-2-(pyridin-2-yl)-1,8-naphthyridine;

5-(7-(1-Ethyl-1H-pyrazol-4-yl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-2-(pyridin-2-yl)-1,8-naphthyridine;

5-(7-(1-Isopropyl-1H-pyrazol-4-yl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-2-(pyrimidin-2-yl)-1,8-naphthyridine;

(1R,4R)-4-(4-(6-Methyl-3-(7-(pyrazin-2-yl)-1,8-naphthyridin-4-yl)imidazo[1,2-b]pyridazin-7-yl)-1H-pyrazol-1-yl)cyclohexan-1-ol;

5-(7-(4-(Azetidin-1-ylmethyl)phenyl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-2-(pyrazin-2-yl)-1,8-naphthyridine;

5-(7-(1-Isopropyl-1H-pyrazol-4-yl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-2-(pyrazin-2-yl)-1,8-naphthyridine;

5-(6-Methyl-7-(1-(tetrahydro-2H-pyran-4-yl)-1H-pyrazol-4-yl)imidazo[1,2-b]pyridazin-3-yl)-2-(pyrazin-2-yl)-1,8-naphthyridine;

5-(7-(1-Isopropyl-1H-pyrazol-4-yl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-2-(1-methyl-1H-pyrazol-3-yl)-1,8-naphthyridine;

5-(7-(4-(Azetidin-1-ylmethyl)phenyl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-2-(1-methyl-1H-pyrazol-3-yl)-1,8-naphthyridine;

N,N-dimethyl-4-(6-methyl-3-(7-(1-methyl-1H-pyrazol-3-yl)-1,8-naphthyridin-4-yl)imidazo[1,2-b]pyridazin-7-yl)benzamide;

5-(7-(4-(Azetidin-1-ylmethyl)phenyl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-2-(5-methyl-1H-pyrazol-3-yl)-1,8-naphthyridine;

4-(4-(6-methyl-3-(7-(5-methyl-1H-pyrazol-3-yl)-1,8-naphthyridin-4-yl)imidazo[1,2-b]pyridazin-7-yl)benzyl)morpholine;

5-(7-(1-Isopropyl-1H-pyrazol-4-yl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-2-(5-methyl-1H-pyrazol-3-yl)-1,8-naphthyridine;

5-(7-(1-Isopropyl-1H-pyrazol-4-yl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-2-(1-methyl-1H-pyrazol-4-yl)-1,8-naphthyridine;

2-(1-Ethyl-1H-imidazol-4-yl)-5-(6-methyl-7-(4-(pyrrolidin-1-ylmethyl)phenyl)imidazo[1,2-b]pyridazin-3-yl)-1,8-naphthyridine;

4-(4-(3-(7-(1-Ethyl-1H-imidazol-4-yl)-1,8-naphthyridin-4-yl)-6-methylimidazo[1,2-b]pyridazin-7-yl)benzyl)morpholine;

1-(4-(3-(7-(1-Ethyl-1H-imidazol-4-yl)-1,8-naphthyridin-4-yl)-6-methylimidazo[1,2-b]pyridazin-7-yl)phenyl)-N,N-dimethylmethanamine;

2-(1-Ethyl-1H-imidazol-4-yl)-5-(7-(1-isopropyl-1H-pyrazol-4-yl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-1,8-naphthyridine;

5-(7-(4-(Azetidin-1-ylmethyl)phenyl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-2-(1-ethyl-1H-imidazol-4-yl)-1,8-naphthyridine;

5-(7-(4-((3,3-Difluoroazetidin-1-yl)methyl)phenyl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-2-(1-ethyl-1H-imidazol-4-yl)-1,8-naphthyridine;

(S)-4-(4-(3-(7-(1-ethyl-1H-imidazol-4-yl)-1,8-naphthyridin-4-yl)-6-methylimidazo[1,2-b]pyridazin-7-yl)benzyl)-2-methylmorpholine;

(S)-(4-(4-(3-(7-(1-ethyl-1H-imidazol-4-yl)-1,8-naphthyridin-4-yl)-6-methylimidazo[1,2-b]pyridazin-7-yl)benzyl)morpholin-2-yl)methanol;

2-(4-Methyl-2H-1,2,3-triazol-2-yl)-5-(6-methyl-7-(4-(pyrrolidin-1-yl)methyl)phenyl)imidazo[1,2-b]pyridazin-3-yl)-1,8-naphthyridine;

5-(7-(1-Isopropyl-1H-pyrazol-4-yl)-6-methylimidazo[1,2-b]pyridazin-3-yl)-2-(4-methyl-2H-1,2,3-triazol-2-yl)-1,8-naphthyridine;

2-(4-Methyl-2H-1,2,3-triazol-2-yl)-5-(6-methyl-7-(1-(tetrahydro-2H-pyran-4-yl)-1H-pyrazol-4-yl)imidazo[1,2-b]pyridazin-3-yl)-1,8-naphthyridine;

N,N-dimethyl-1-(4-(6-methyl-3-(7-(4-methyl-2H-1,2,3-triazol-2-yl)-1,8-naphthyridin-4-yl)imidazo[1,2-b]pyridazin-7-yl)phenyl)methanamine;

4-(4-(6-Methyl-3-(7-(4-methyl-2H-1,2,3-triazol-2-yl)-1,8-naphthyridin-4-yl)imidazo[1,2-b]pyridazin-7-yl)benzyl)morpholine;

N,N-dimethyl-1-(4-(6-methyl-3-(7-(4-methyl-2H-1,2,3-triazol-2-yl)-1,8-naphthyridin-4-yl)imidazo[1,2-b]pyridazin-7-yl)phenyl)methanamine;

(S)-3-methyl-1-(4-(6-methyl-3-(7-(4-methyl-2H-1,2,3-triazol-2-yl)-1,8-naphthyridin-4-yl)imidazo[1,2-b]pyridazin-7-yl)benzyl)pyrrolidin-3-ol; or

1-(4-(6-methyl-3-(7-(4-methyl-2H-1,2,3-triazol-2-yl)-1,8-naphthyridin-4-yl)imidazo[1,2-b]pyridazin-7-yl)benzyl)piperidin-4-ol;

or a pharmaceutically acceptable salt thereof.

48. The compound of claim 1, wherein the compound is

4-methyl-1-(4-(6-methyl-3-(7-(4-methyl-2H-1,2,3-triazol-2-yl)-1,8-naphthyridin-4-yl)imidazo[1,2-b]pyridazin-7-yl)benzyl)piperidin-4-ol;

3-methyl-1-(4-(6-methyl-3-(7-(4-methyl-2H-1,2,3-triazol-2-yl)-1,8-naphthyridin-4-yl)imidazo[1,2-b]pyridazin-7-yl)benzyl)azetidin-3-ol;

2-(4-methyl-2H-1,2,3-triazol-2-yl)-5-(6-methyl-7-(4-((4-methylpiperazin-1-yl)methyl)phenyl)imidazo[1,2-b]pyridazin-3-yl)-1,8-naphthyridine;

1-(4-(3-(7-(1-ethyl-1H-imidazol-4-yl)-1,8-naphthyridin-4-yl)-6-methylimidazo[1,2-b]pyridazin-7-yl)benzyl)piperidin-4-ol; or

1-(4-(3-(7-(1-ethyl-1H-imidazol-4-yl)-1,8-naphthyridin-4-yl)-6-methylimidazo[1,2-b]pyridazin-7-yl)benzyl)-4-methylpiperidin-4-ol;

or a pharmaceutically acceptable salt thereof.

49. A pharmaceutical composition comprising a compound of claim 1, or a pharmaceutically acceptable salt thereof, and at least one pharmaceutically acceptable carrier or excipient.

50. A compound of claim 1, or a pharmaceutically acceptable salt thereof, for use in the treatment of a disease or disorder associated with inhibition of ALK2 interaction.

51. A compound of claim 1, or a pharmaceutically acceptable salt thereof, for use in the treatment of a cancer.

52. A compound of claim 1, or a pharmaceutically acceptable salt thereof, and ruxolitinib, or a pharmaceutically acceptable salt thereof, for use in combination in the treatment of a myeloproliferative disease.

53. A compound of claim 1, or a pharmaceutically acceptable salt thereof, for use in the treatment of a myeloproliferative disease, wherein the compound is for use by administration in combination with ruxolitinib, or a pharmaceutically acceptable salt thereof.

54. Ruxolitinib, or a pharmaceutically acceptable salt thereof, for use in the treatment of a myeloproliferative disease, wherein ruxolitinib is for use by administration in combination with a compound of claim 1, or a pharmaceutically acceptable salt thereof.

55. The compound of claim 1, wherein the compound is 3-methyl-1-(4-(6-methyl-3-(7-(4-methyl-2H-1,2,3-triazol-2-yl)-1,8-naphthyridin-4-yl)imidazo[1,2-b]pyridazin-7-yl)benzyl)azetidin-3-ol.

56. A pharmaceutical composition comprising a compound of claim 55, or a pharmaceutically acceptable salt thereof, and at least one pharmaceutically acceptable carrier or excipient.

57. The compound of claim 1, wherein the compound is 1-(4-(6-methyl-3-(7-(4-methyl-2H-1,2,3-triazol-2-yl)-1,8-naphthyridin-4-yl)imidazo[1,2-b]pyridazin-7-yl)benzyl)piperidin-4-ol.

58. A pharmaceutical composition comprising a compound of claim 57, or a pharmaceutically acceptable salt thereof, and at least one pharmaceutically acceptable carrier or excipient.

59. The compound of claim 1, wherein the compound is (S)-4-(4-(3-(7-(1-ethyl-1H-imidazol-4-yl)-1,8-naphthyridin-4-yl)-6-methylimidazo[1,2-b]pyridazin-7-yl)benzyl)-2-methylmorpholine.

60. A pharmaceutical composition comprising a compound of claim 59, or a pharmaceutically acceptable salt thereof, and at least one pharmaceutically acceptable carrier or excipient.

61. The compound of claim 1, wherein R^3 is H.

62. The compound of claim 1, wherein R^4 is H.

63. Use of a compound of claim 1, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for the treatment of a disease or disorder associated with inhibition of ALK2 interaction.

64. Use of a compound of claim 1, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for the treatment of a cancer.

65. Use of a compound of claim 1, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for the treatment of a myeloproliferative disease, wherein the medicament is to be administered in combination with ruxolitinib, or a pharmaceutically acceptable salt thereof.