

R^{10} is selected from the group consisting of H, $-CF_3$, $-(C_{1-3} \text{ alkyl})_n \text{aryl}(R^6)_q$, and $-C_{1-9} \text{ alkyl}$;

R^{11} is $-(C_{1-3} \text{ alkyl})_n \text{aryl}(R^6)_q$;

each R^{13} is a substituent attached to the aryl ring and independently selected from the group consisting of H, halide, $-CF_3$, CN, $-(C_{1-3} \text{ alkyl})_n \text{heterocyclyl}(R^8)_q$, $-(C_{1-9} \text{ alkyl})_n N(R^9)_2$ and $-(C_{1-9} \text{ alkyl})_n NHSO_2 R^{18}$;

each R^{14} is a substituent attached to the heterocyclyl ring and independently selected from the group consisting of H, lower alkyl, halide, $-CF_3$ and CN;

each R^{15} is a substituent attached to the heteroaryl ring and independently selected from the group consisting of H, $-C_{1-3} \text{ alkyl}$, halide, $-CF_3$, CN, $-C(=O)(C_{1-3} \text{ alkyl})$, $-(C_{1-9} \text{ alkyl})_n N(R^9)_2$ and $-(C_{1-9} \text{ alkyl})_n NHSO_2 R^{18}$;

each R^{16} is independently selected from the group consisting of H and $-C_{1-3} \text{ alkyl}$;

each R^{17} is a substituent attached to the heterocyclyl ring and independently selected from the group consisting of H, $-(C_{1-9} \text{ alkyl})_n \text{aryl}(R^6)_q$, and $-C_{1-9} \text{ alkyl}$;

each R^{18} is a $-C_{1-3} \text{ alkyl}$;

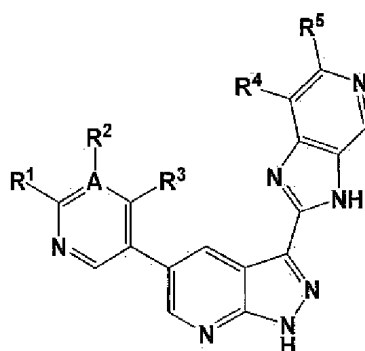
A is N or C;

with the proviso that if A is N then R^2 is nil;

each q is independently an integer of 1 to 5; and

each n is independently an integer of 0 or 1.

[0011b] In one aspect, there is provided a compound, or pharmaceutically acceptable salt thereof, having the structure of Formula I:



I

wherein:

R^1 is H;

R^2 is $-(C_{1-9} \text{ alkyl})_n N(R^9)_2$;

R^3 is H;

R^4 is -aryl(R^{13})_q;

R^5 is H;

each R^8 is a substituent attached to the heterocyclyl ring and independently selected from the group consisting of H, halide, and -C₁₋₄ alkyl;

each R^9 is independently selected from the group consisting of H, -C₁₋₉ alkyl, -(C₁₋₃ alkyl)_ncarbocyclyl and -(C₁₋₉ alkyl)N(R^{16})₂;

each R^{13} is 1-2 substituents each attached to the aryl ring and independently selected from the group consisting of H, halide, -(C₁₋₃ alkyl)_nheterocyclyl(R^8)_q, -(C₁₋₉ alkyl)_nN(R^9)₂ and -(C₁₋₉ alkyl)_nNHSO₂ R^{18} ;

each R^{16} is independently selected from the group consisting of H and -C₁₋₃ alkyl;

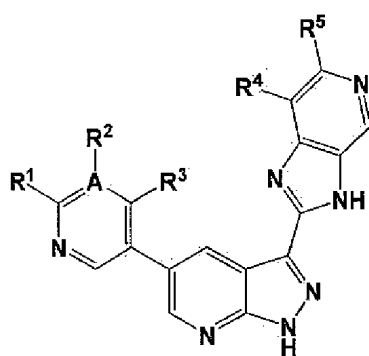
each R^{18} is -C₁₋₃ alkyl;

A is C;

each q is independently an integer of 1 or 2; and

each n is independently an integer of 0 or 1.

[0012] One embodiment disclosed herein includes a compound having the structure of Formula I or a pharmaceutically acceptable salt thereof:



I

wherein:

R^1 is H;

R^2 is $-(C_{1-9} \text{ alkyl})_n N(R^9)_2$;

R^3 is H;

R^4 is $-\text{aryl}(R^{13})_q$;

R^5 is H;

each R^8 is a substituent attached to the heterocyclyl ring and independently selected from the group consisting of H, halide, and $-C_{1-4}$ alkyl;

each R^9 is independently selected from the group consisting of H, $-C_{1-9}$ alkyl, $-(C_{1-3} \text{ alkyl})_n \text{carbocyclyl}$ and $-(C_{1-9} \text{ alkyl})N(R^{16})_2$;

each R^{13} is 1-2 substituents each attached to the aryl ring and independently selected from the group consisting of H, halide, $-(C_{1-3} \text{ alkyl})_n \text{heterocyclyl}(R^8)_q$, $-(C_{1-9} \text{ alkyl})N(R^9)_2$ and $-(C_{1-9} \text{ alkyl})_n \text{NHSO}_2 R^{18}$;

each R^{16} is independently selected from the group consisting of H and $-C_{1-3}$ alkyl;

each R^{18} is $-C_{1-3}$ alkyl;

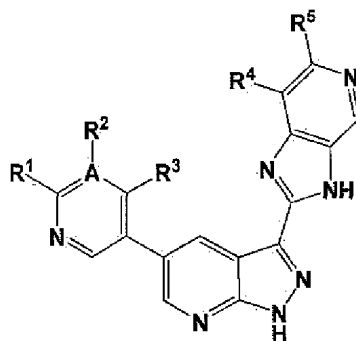
A is C;

each q is independently an integer of 1 or 2; and

each n is independently an integer of 0 or 1.

WHAT IS CLAIMED IS:

1. A compound, or pharmaceutically acceptable salt thereof, having the structure of Formula I:



I

wherein:

R¹ is H;

R² is -(C₁₋₉ alkyl)_nN(R⁹)₂;

R³ is H;

R⁴ is -aryl(R¹³)_q;

R⁵ is H;

each R⁸ is a substituent attached to the heterocyclyl ring and independently selected from the group consisting of H, halide, and -C₁₋₄ alkyl;

each R⁹ is independently selected from the group consisting of H, -C₁₋₉ alkyl, -(C₁₋₃ alkyl)_ncarbocyclyl and -(C₁₋₉ alkyl)N(R¹⁶)₂;

each R¹³ is 1-2 substituents each attached to the aryl ring and independently selected from the group consisting of H, halide, -(C₁₋₃ alkyl)_nheterocyclyl(R⁸)_q, -(C₁₋₉ alkyl)_nN(R⁹)₂ and -(C₁₋₉ alkyl)_nNHSO₂R¹⁸;

each R¹⁶ is independently selected from the group consisting of H and -C₁₋₃ alkyl;

each R¹⁸ is -C₁₋₃ alkyl;

A is C;

each q is independently an integer of 1 or 2; and

each n is independently an integer of 0 or 1.

2. The compound of claim 1, wherein the R^{13} heterocyclyl is selected from the group consisting of azetidiny(R^8)_q, pyrrolidinyl(R^8)_q, piperidinyl(R^8)_q, piperazinyl(R^8)_q, and morpholinyl(R^8)_q.

3. The compound according to any of the claims 1-2, wherein R^2 is $-CH_2N(R^9)_2$ or $-N(R^9)_2$.

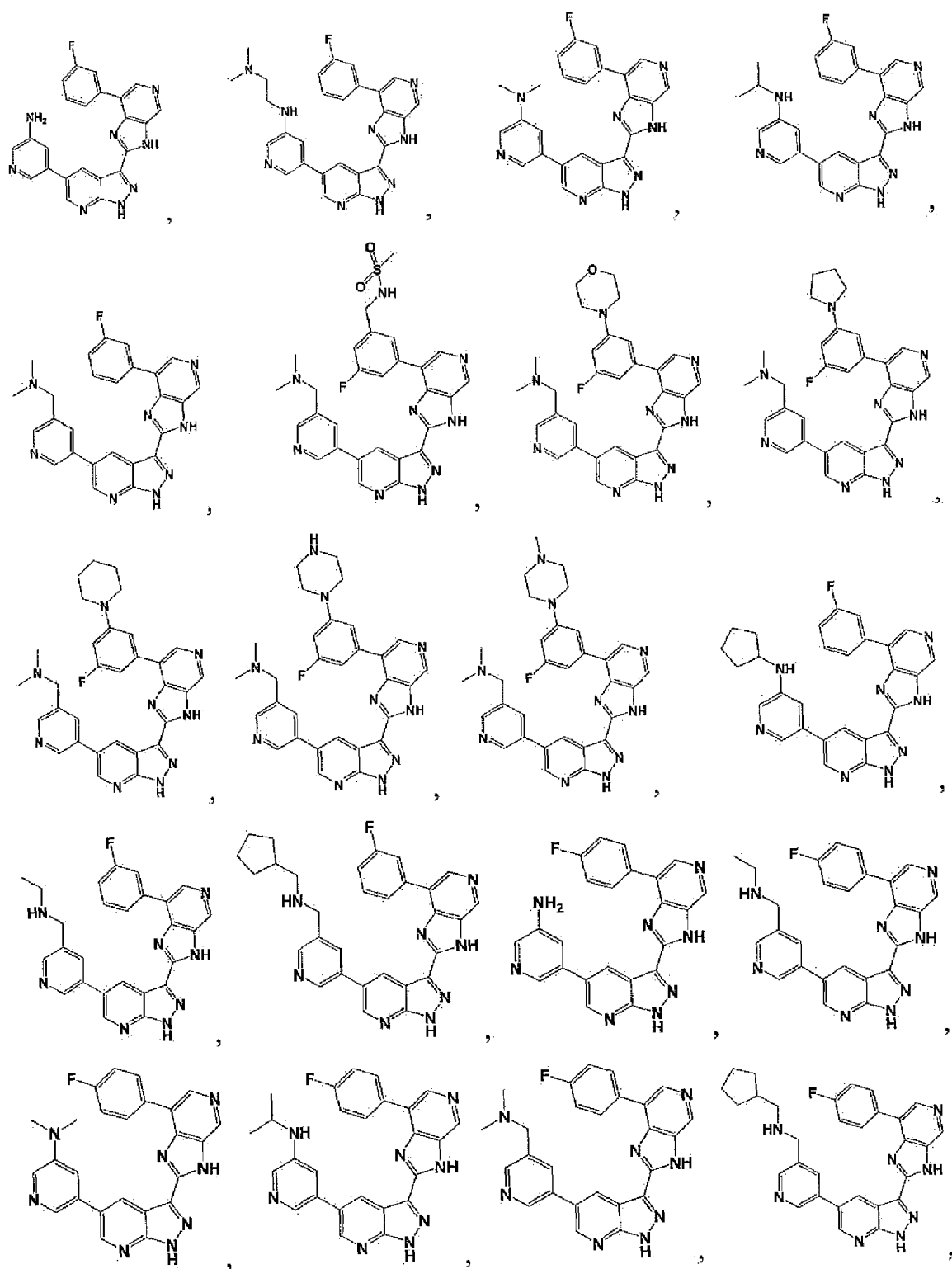
4. The compound according to any of the claims 1-3, wherein R^9 is independently selected from the group consisting of H, Me, Et, n-propyl, isopropyl, and $-CH_2$ carbocyclyl.

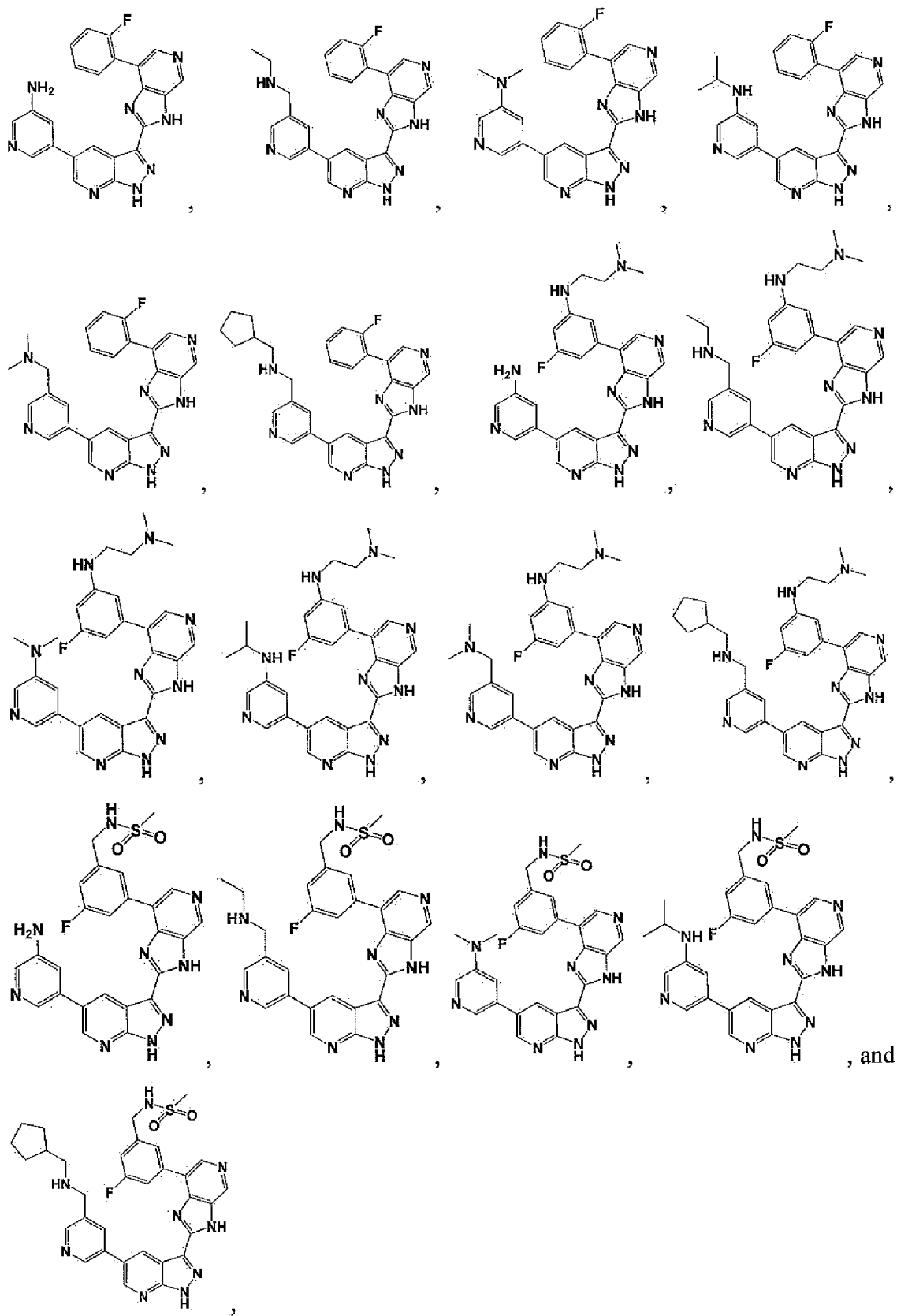
5. The compound according to any of the claims 1 and 3-4, wherein R^{13} is one substituent attached to the phenyl ring and the substituent is a fluorine atom.

6. The compound according to any of the claims 1 and 3-4, wherein R^{13} is two substituents each attached to the phenyl ring and the substituents are a fluorine atom and $-N(R^9)_2$, wherein R^9 is independently selected from the group consisting of H and $-CH_2CH_2N(R^{16})_2$, and wherein R^{16} is independently selected from the group consisting of H, Me, and Et.

7. The compound according to any of the claims 1 and 3-4, wherein R^{13} is two substituents each attached to the phenyl ring and the substituents are a fluorine atom and $-(CH_2)_nNHSO_2R^{18}$, wherein R^9 is independently selected from the group consisting of Me and Et.

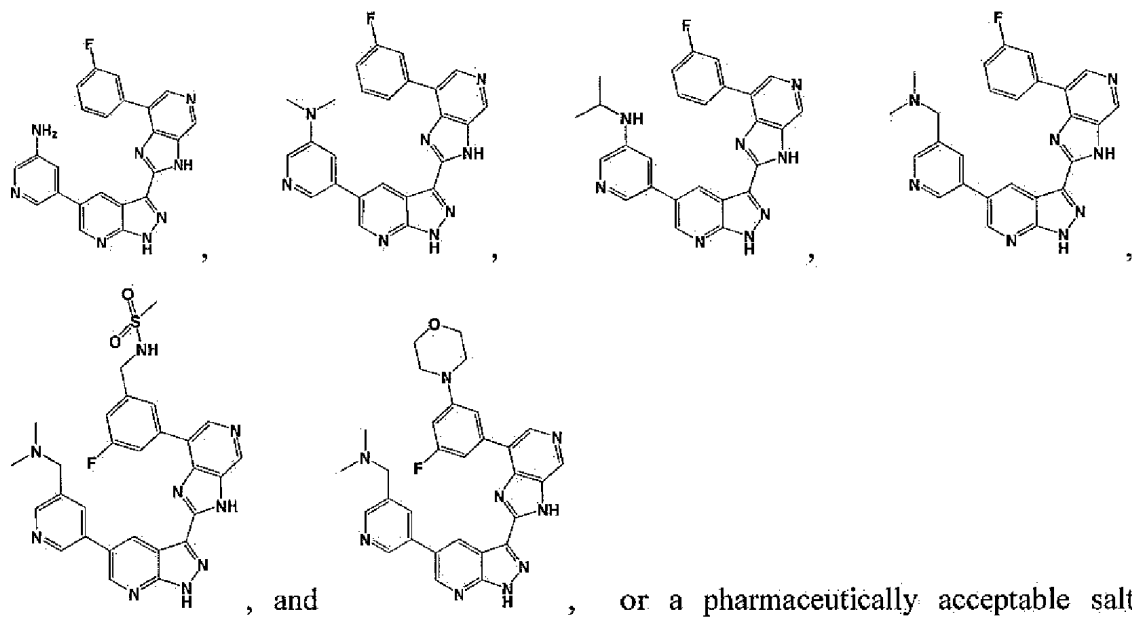
8. The compound of claim 1, wherein the compound of Formula (I) has a structure selected from the group consisting of:



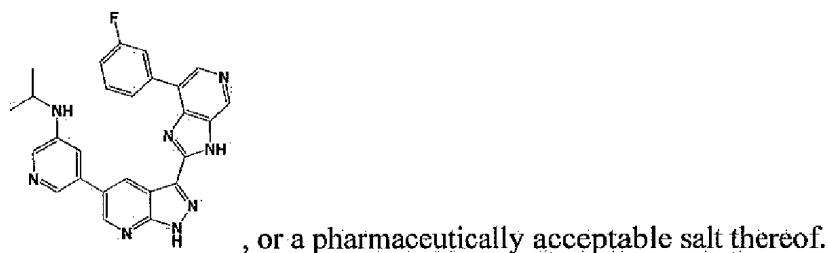


or a pharmaceutically acceptable salt thereof.

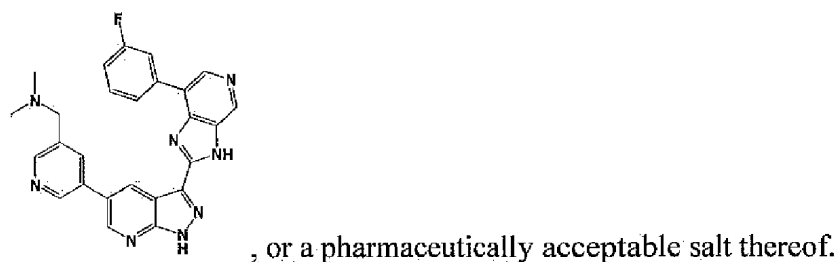
9. The compound of either claim 1 or 8, wherein the compound of Formula (I) has a structure selected from the group consisting of:



10. The compound according to any of the claims 1 and 8-9, wherein the compound has a structure of:



11. The compound according to any of the claims 1 and 8-9, wherein the compound has a structure of:



12. A pharmaceutical composition comprising a compound according to any one of the claims 1-11, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable excipient.

13. A compound according to any one of claims 1-11, or a pharmaceutically acceptable salt thereof, for use in treating a disorder or disease in a patient, wherein the disorder or disease is selected from the group consisting of: diabetic retinopathy, pulmonary fibrosis, idiopathic pulmonary fibrosis (IPF), rheumatoid arthritis, scleroderma, a mycotic or viral infection, a bone or cartilage disease, Alzheimer's disease, dementia, Parkinson's disease, lung disease, and cancer.

14. The compound for use of claim 13, wherein the disorder or disease is cancer.

15. The compound for use of claim 13, wherein the disorder or disease is pulmonary fibrosis.

16. The compound for use of claim 13, wherein the disorder or disease is idiopathic pulmonary fibrosis (IPF).

17. The compound for use of claim 13, wherein the disorder or disease is scleroderma.

18. The compound for use of claim 13, wherein the disorder or disease is a bone or cartilage disease.

19. The compound for use of either claim 13 or 18, wherein the bone or cartilage disease is osteoarthritis.

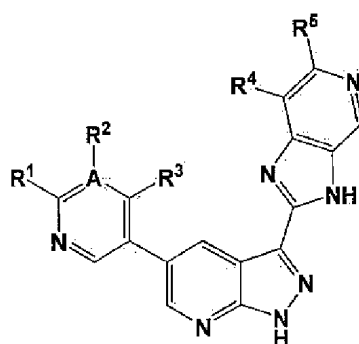
20. A compound according to any one of claims 1-11, or a pharmaceutically acceptable salt thereof, for use in treating a disorder or disease in a patient, wherein the disorder or disease is selected from the group consisting of: polyposis coli, osteoporosis-pseudoglioma syndrome, familial exudative vitreoretinopathy, retinal angiogenesis, early coronary disease, tetra-amelia syndrome, Müllerian-duct regression and virilization, SERKAL syndrome, diabetes mellitus type 2, Fuhrmann syndrome, Al-Awadi/Raas-Rothschild/Schinzel phocomelia syndrome, odonto-onycho-dermal dysplasia, obesity, split-hand/foot malformation, caudal duplication syndrome, tooth agenesis, Wilms tumor, skeletal dysplasia, focal dermal hypoplasia, autosomal recessive anonychia, neural tube defects, alpha-thalassemia (ATRX) syndrome, fragile X syndrome, ICF syndrome,

Angelman syndrome, Prader-Willi syndrome, Beckwith-Wiedemann Syndrome, Norrie disease, and Rett syndrome.

21. The compound for use of either claim 13 or 20, wherein the patient is a human.

22. The compound for use of claim 14, wherein the cancer is chosen from: hepatocellular carcinoma, colon cancer, breast cancer, pancreatic cancer leukemia, lymphoma, sarcoma, and ovarian cancer.

23. Use of a compound, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for treating idiopathic pulmonary fibrosis (IPF), the compound having the structure of Formula I:



I

wherein:

R^1 is H;

R^2 is $-(C_{1-9} \text{ alkyl})_n N(R^9)_2$;

R^3 is H;

R^4 is $-\text{aryl}(R^{13})_q$;

R^5 is H;

each R^8 is a substituent attached to the heterocyclyl ring and independently selected from the group consisting of H, halide, and $-C_{1-4}$ alkyl;

each R^9 is independently selected from the group consisting of H, $-C_{1-9}$ alkyl, $-(C_{1-3} \text{ alkyl})_n \text{carbocyclyl}$ and $-(C_{1-9} \text{ alkyl})N(R^{16})_2$;

each R^{13} is 1-2 substituents each attached to the aryl ring and independently selected from the group consisting of H, halide, $-(C_{1-3} \text{ alkyl})_n \text{heterocyclyl}(R^8)_q$, $-(C_{1-9} \text{ alkyl})_n N(R^9)_2$ and $-(C_{1-9} \text{ alkyl})_n \text{NHSO}_2 R^{18}$;

each R^{16} is independently selected from the group consisting of H and $-C_{1-3}$ alkyl;

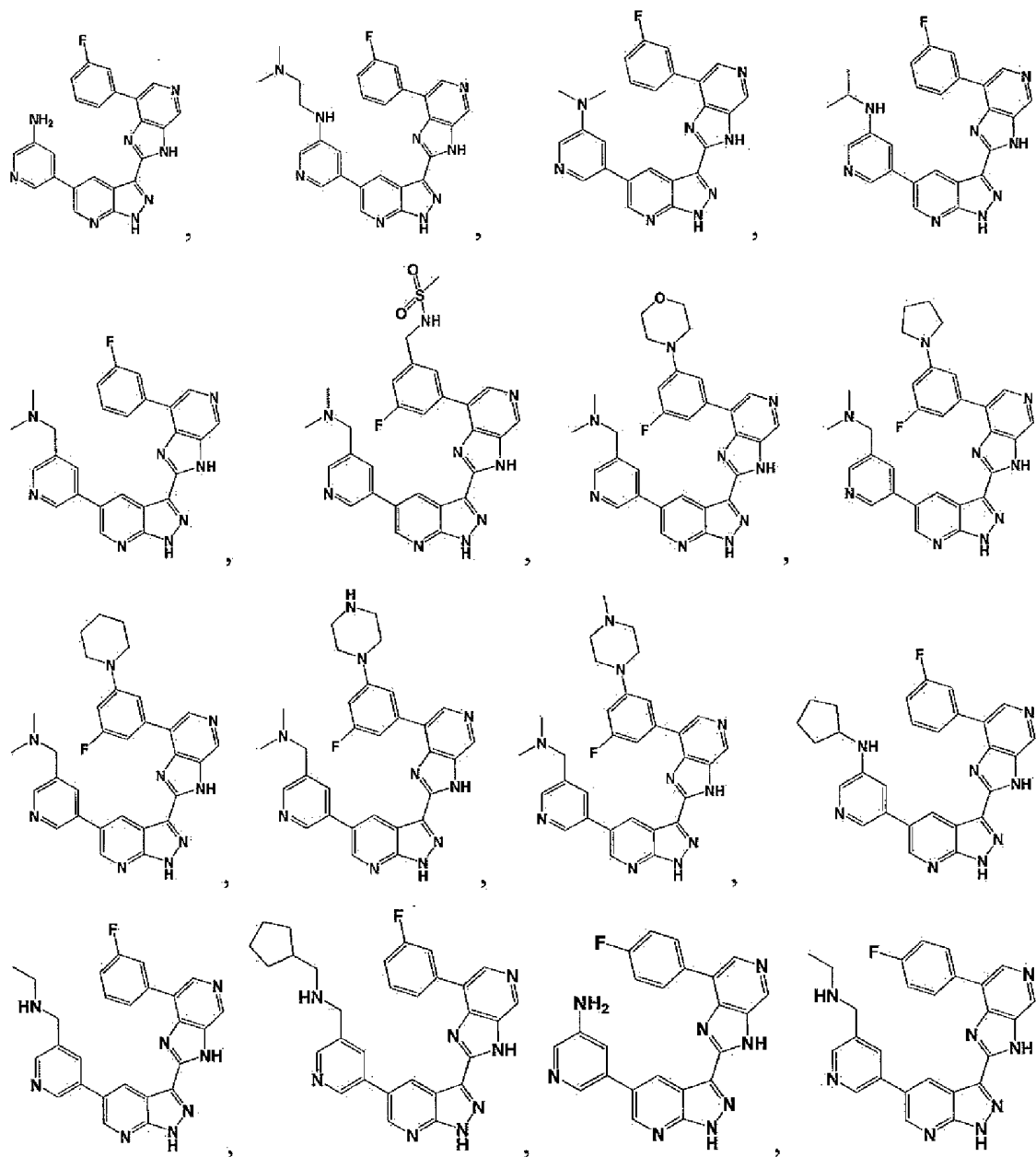
each R^{18} is $-C_{1-3}$ alkyl;

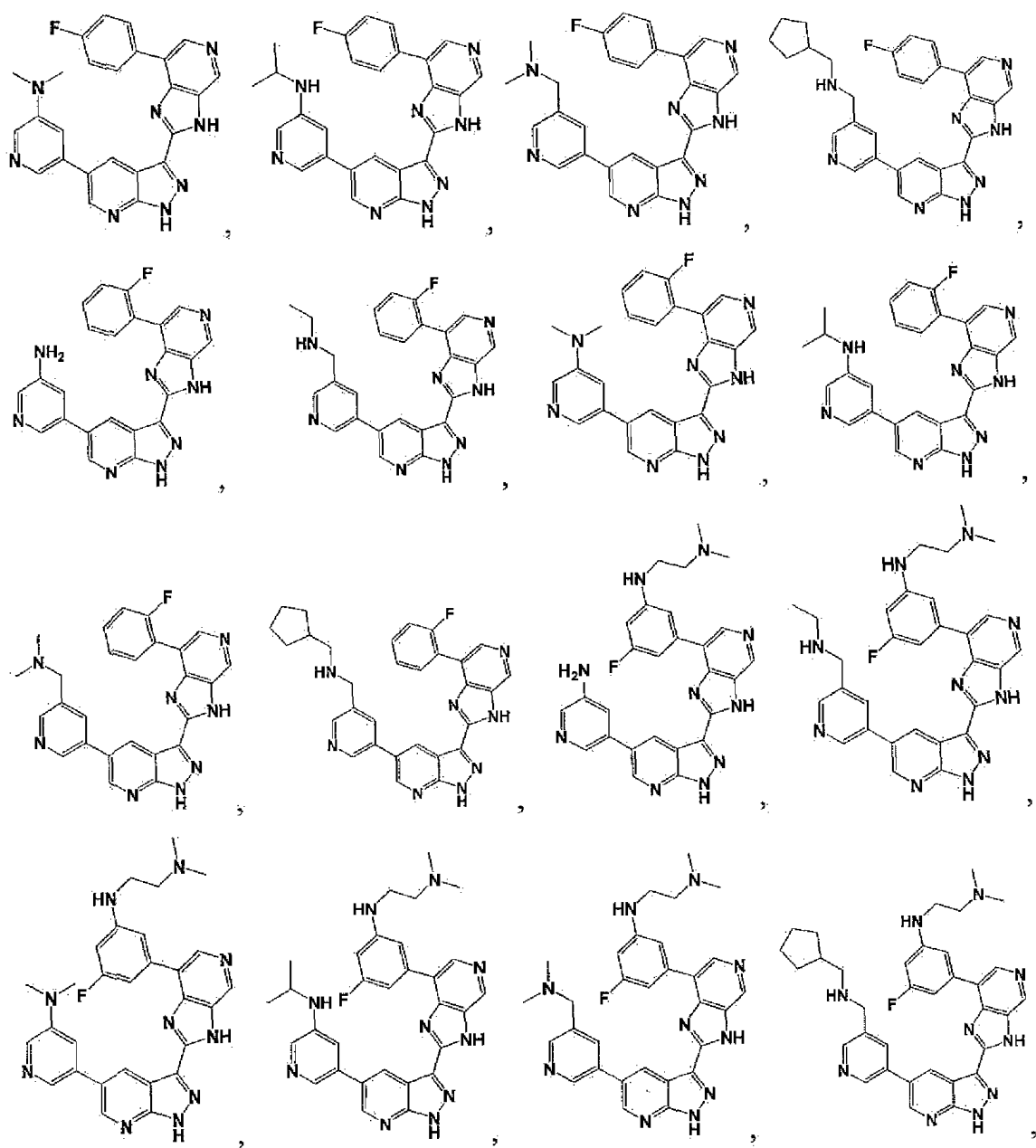
A is C;

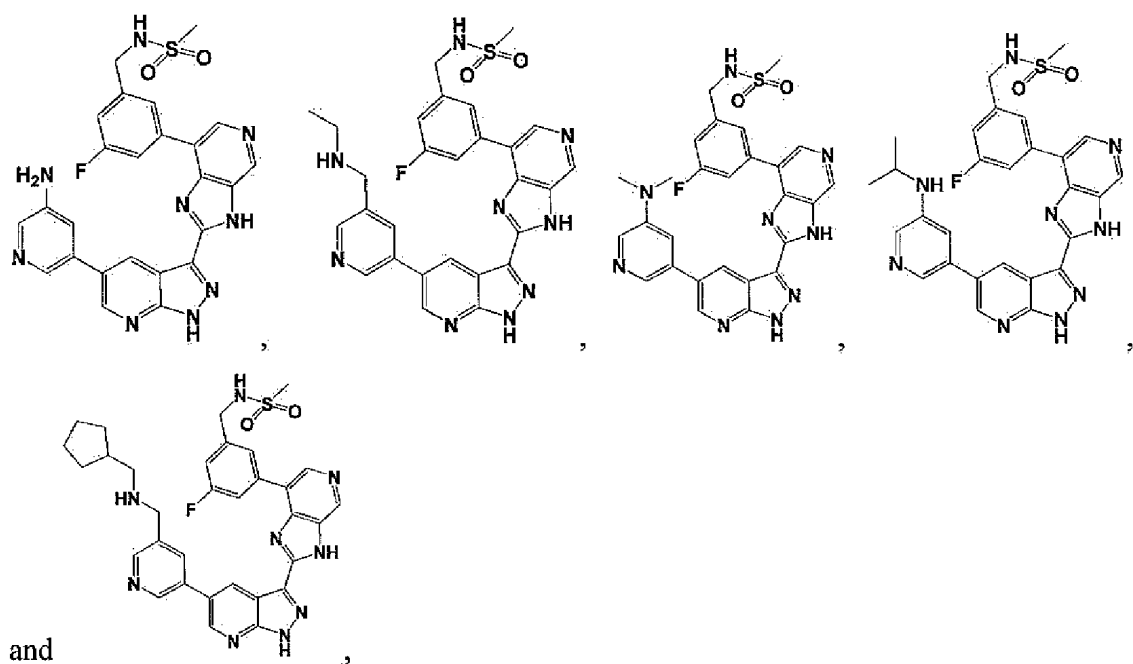
each q is independently an integer of 1 or 2; and

each n is independently an integer of 0 or 1.

24. The use of claim 23, wherein the compound of Formula (I) has a structure selected from the group consisting of:

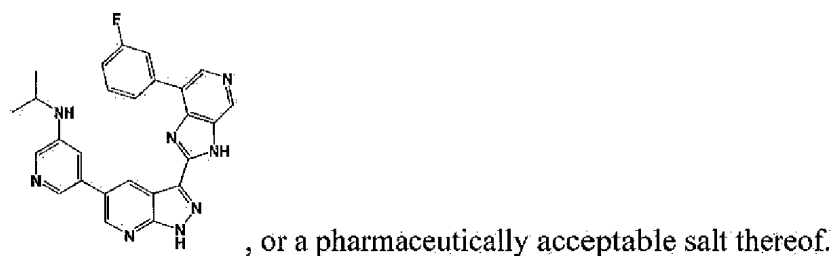






or a pharmaceutically acceptable salt thereof.

25. The use of either claim 23 or 24, wherein the compound has a structure of:



26. The use of either claim 23 or 24, wherein the compound has a structure of:

