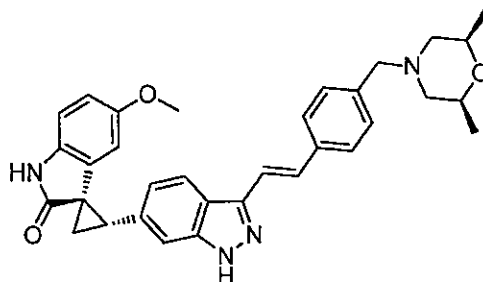


CLAIMS

What is claimed is:

1. A fumarate salt of compound (I) represented by the following structural formula:

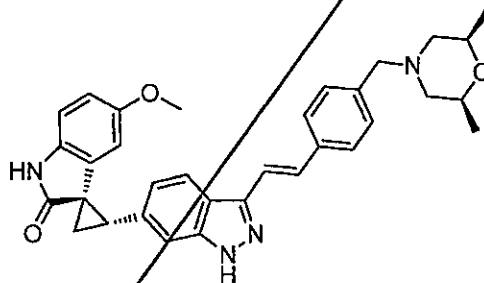


Compound (I)

- 5 wherein the molar ratio between compound (I) and fumaric acid is 1:1.
2. The fumarate salt of claim 1, wherein at least 80% by weight of the salt is crystalline.
3. The fumarate salt of claim 1 or 2, wherein at least 80% by weight of the salt is in a single crystalline form.
4. The fumarate salt of any one of claims 1-3, wherein at least 99% by weight of the salt is crystalline.
- 10 5. The fumarate salt of any one of claims 1-4, wherein at least 99% by weight of the salt is in a single crystalline form.
6. The fumarate salt of any one of claims 1-5, wherein at least 90% by weight of the fumarate salt is single crystalline form A, and the X-ray powder diffraction pattern of the single crystalline form A is shown in Figure 7.
- 15 7. The fumarate salt of any one of claims 1-6, wherein at least 90% by weight of the fumarate salt is single crystalline form A, characterized by an X-ray powder diffraction pattern which comprises peaks at:
- a) 9.7° , 16.7° , and $20.1^\circ \pm 0.2$ in 2θ ; or
- 20 b) 8.2° , 9.7° , 16.7° , and $20.1^\circ \pm 0.2$ in 2θ ; or
- c) 8.2° , 9.7° , 10.7° , 11.5° , 14.9° , 16.7° , 20.1° , and $23.5^\circ \pm 0.2$ in 2θ ; or
- d) 8.2° , 9.7° , 10.7° , 11.5° , 13.6° , 14.9° , 16.7° , 18.1° , 18.8° , 20.1° , 23.5° , and $24.5^\circ \pm 0.2$ in 2θ .

8. The fumarate salt of any one of claims 1-5, wherein at least 90% by weight of the fumarate salt is single crystalline form B, and the X-ray powder diffraction pattern of the single crystalline form B is shown in Figure 8.
9. The fumarate salt of any one of claims 1-5 and 8, wherein at least 90% by weight of the fumarate salt is single crystalline form B, characterized by an X-ray powder diffraction pattern which comprises peaks at:
- a) 11.9° and $14.9^\circ \pm 0.2$ in 2θ ; or
- b) 11.9° , 14.9° , 18.7° , and $21.5^\circ \pm 0.2$ in 2θ ; or
- c) 5.5° , 5.9° , 11.9° , 14.9° , 16.7° , 17.4° , 18.7° , 21.5° , and $23.4^\circ \pm 0.2$ in 2θ .
10. The fumarate salt of any one of claims 1-5, wherein at least 75-80% by weight of the fumarate salt is single crystalline form C, and the X-ray powder diffraction pattern of the single crystalline form C is shown in Figure 9.
11. The fumarate salt of any one of claims 1-5 and 10, wherein at least 75-80% by weight of the fumarate salt is single crystalline form C, characterized by an X-ray powder diffraction pattern which comprises peaks at:
- a) 16.8° , 16.9° , and $19.9^\circ \pm 0.2$ in 2θ ; or
- b) 9.8° , 16.8° , 16.9° , 19.9° , and $23.5^\circ \pm 0.2$ in 2θ ; or
- c) 9.7° , 9.8° , 11.7° , 15.1° , 16.8° , 16.9° , 19.9° , 23.5° , and $23.7^\circ \pm 0.2$ in 2θ .
12. The fumarate salt of any one of claims 1-5, wherein at least 90% by weight of the fumarate salt is single crystalline form D, and the X-ray powder diffraction pattern of the single crystalline form D is shown in Figure 10.
13. The fumarate salt of any one of claims 1-5 and 12, wherein at least 90% by weight of the fumarate salt is single crystalline form D, characterized by an X-ray powder diffraction pattern which comprises peaks at:
- a) 9.6° , 12.8° , 16.0° , and $22.0^\circ \pm 0.2$ in 2θ ; or
- b) 9.6° , 12.8° , 16.0° , 16.9° , 21.2° , and $22.0^\circ \pm 0.2$ in 2θ ; or
- c) 9.6° , 12.8° , 16.0° , 16.9° , 20.8° , 21.2° , 21.5° , and $22.0^\circ \pm 0.2$ in 2θ .
- d) 9.6° , 11.7° , 12.0° , 12.8° , 16.0° , 16.6° , 16.9° , 18.1° , 19.2° , 19.8° , 20.7° , 20.8° , 21.2° , 21.5° , 22.0° , 22.5° , 24.0° , 26.0° , and $29.8^\circ \pm 0.2$ in 2θ .

14. The fumarate salt of any one of claims 1-7, wherein at least 90% by weight of the fumarate salt is single crystalline form A, characterized by differential scanning calorimeter (DSC) peak phase transition temperatures of 112 °C and 158 °C.
15. The fumarate salt of any one of claims 1-5, 8, and 9, wherein at least 90% by weight of the fumarate salt is single crystalline form B, characterized by differential scanning calorimeter (DSC) peak phase transition temperatures of 58 °C and 162 °C.
16. The fumarate salt of any one of claims 1-5, 10, and 11, wherein at least 90% by weight of the fumarate salt is single crystalline form C, characterized by differential scanning calorimeter (DSC) peak phase transition temperatures of 62 °C and 156 °C.
17. The fumarate salt of any one of claims 1-5, 12, and 13, wherein at least 90% by weight of the fumarate salt is single crystalline form D, characterized by differential scanning calorimeter (DSC) peak phase transition temperature of 219°C.
18. A maleate salt of compound (I) represented by the following structural formula:



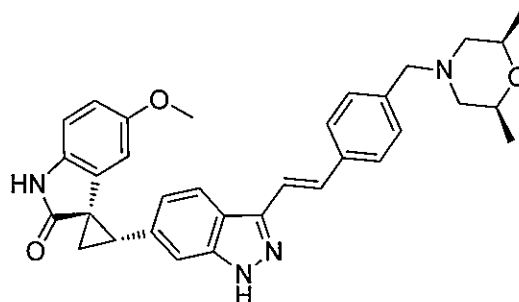
Compound (I)

- wherein the molar ratio between compound (I) and maleic acid is 1:1.
19. The maleate salt of claim 18, wherein at least 90% by weight of the salt is crystalline.
20. The maleate salt of claim 18 or 19, wherein at least 90% by weight of the salt is in a single crystalline form.
21. The maleate salt of any one of claims 18-20, wherein at least 99% by weight of the salt is crystalline.
22. The maleate salt of any one of claims 18-21, wherein at least 99% by weight of the salt is in a single crystalline form.
23. The maleate salt of any one of claims 18-22, wherein at least 90% by weight of the maleate salt is single crystalline form A, and the X-ray powder diffraction pattern of the single crystalline form A is shown in Figure 11.

24. The maleate salt of any one of claims 18-23, wherein at least 90% by weight of the maleate salt is single crystalline form A, characterized by an X-ray powder diffraction pattern which comprises peaks at:
- a) 11.5°, 12.6°, 14.9°, and 15.1° ± 0.2 in 2θ; or
- 5 b) 10.8°, 11.5°, 12.4°, 12.6°, 14.9°, 15.1°, and 17.1° ± 0.2 in 2θ; or
- c) 5.8°, 10.8°, 11.5°, 12.4°, 12.6°, 14.9°, 15.1°, 17.1°, 18.6°, 23.5°, and 26.1° ± 0.2 in 2θ; or
- d) 5.5°, 5.8°, 10.8°, 11.5°, 12.4°, 12.6°, 14.1°, 14.9°, 15.1°, 16.7°, 17.1°, 17.8°, 18.6°, 19.5°, 19.9°, 21.9°, 22.2°, 23.0°, 23.3°, 23.5°, 23.9°, and 26.1° ± 0.2 in 2θ.
- 10 25. The maleate salt of any one of claims 18-24, wherein at least 90% by weight of the maleate salt is single crystalline form A, characterized by differential scanning calorimeter (DSC) peak phase transition temperature of 219°C.
26. A pharmaceutical composition comprising the fumarate salt of any one of claims 1-17 or the maleate salt of any one of claims 18-25, and a pharmaceutically acceptable
- 15 carrier or diluent, wherein at least 80% by weight of the salt is crystalline.
27. A method of treating a subject with cancer, comprising administering to the subject an effective amount of a salt of any one of claims 1-25 or a pharmaceutically composition thereof.
28. The method of claim 27, wherein the cancer is selected from the group consisting of
- 20 lung cancer, breast cancer, colon cancer, neuroblastoma, prostate cancer, melanoma, glioblastoma multiforme, ovarian cancer, lymphoma, leukemia, osteosarcoma, germinoma, glioma, fibrosarcoma, gastrointestinal sarcoma, fibrous histiocytoma, round cell sarcoma, synovial sarcoma, cervical cancer, anogenital cancer, head and neck cancer, and oropharyngeal cancer.
- 25 29. The method of claim 28, wherein the cancer is selected from the group consisting of lung cancer, breast cancer and colon cancer.
30. The method of claim 29, wherein the cancer is breast cancer.

What is claimed is:

1. A fumarate salt of compound (I) represented by the following structural formula:

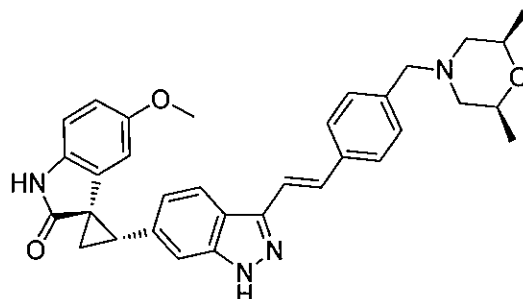


Compound (I)

- wherein the molar ratio between compound (I) and fumaric acid is 1:1.
2. The fumarate salt of claim 1, wherein at least 80% by weight of the salt is crystalline.
 3. The fumarate salt of claim 1 or 2, wherein at least 80% by weight of the salt is in a single crystalline form.
 4. The fumarate salt of any one of claims 1-3, wherein at least 99% by weight of the salt is crystalline.
 5. The fumarate salt of any one of claims 1-4, wherein at least 99% by weight of the salt is in a single crystalline form.
 6. The fumarate salt of any one of claims 1-5, wherein at least 90% by weight of the fumarate salt is single crystalline form A, and the X-ray powder diffraction pattern of the single crystalline form A is shown in Figure 7.
 7. The fumarate salt of any one of claims 1-6, wherein at least 90% by weight of the fumarate salt is single crystalline form A, characterized by an X-ray powder diffraction pattern which comprises peaks at:
 - a) 9.7° , 16.7° , and $20.1^\circ \pm 0.2$ in 2θ ; or
 - b) 8.2° , 9.7° , 16.7° , and $20.1^\circ \pm 0.2$ in 2θ ; or
 - c) 8.2° , 9.7° , 10.7° , 11.5° , 14.9° , 16.7° , 20.1° , and $23.5^\circ \pm 0.2$ in 2θ ; or
 - d) 8.2° , 9.7° , 10.7° , 11.5° , 13.6° , 14.9° , 16.7° , 18.1° , 18.8° , 20.1° , 23.5° , and $24.5^\circ \pm 0.2$ in 2θ .

8. The fumarate salt of any one of claims 1-5, wherein at least 90% by weight of the fumarate salt is single crystalline form B, and the X-ray powder diffraction pattern of the single crystalline form B is shown in Figure 8.
9. The fumarate salt of any one of claims 1-5 and 8, wherein at least 90% by weight of the fumarate salt is single crystalline form B, characterized by an X-ray powder diffraction pattern which comprises peaks at:
 - a) 11.9° and $14.9^{\circ} \pm 0.2$ in 2θ ; or
 - b) 11.9° , 14.9° , 18.7° , and $21.5^{\circ} \pm 0.2$ in 2θ ; or
 - c) 5.5° , 5.9° , 11.9° , 14.9° , 16.7° , 17.4° , 18.7° , 21.5° , and $23.4^{\circ} \pm 0.2$ in 2θ .
10. The fumarate salt of any one of claims 1-5, wherein at least 75-80% by weight of the fumarate salt is single crystalline form C, and the X-ray powder diffraction pattern of the single crystalline form C is shown in Figure 9.
11. The fumarate salt of any one of claims 1-5 and 10, wherein at least 75-80% by weight of the fumarate salt is single crystalline form C, characterized by an X-ray powder diffraction pattern which comprises peaks at:
 - a) 16.8° , 16.9° , and $19.9^{\circ} \pm 0.2$ in 2θ ; or
 - b) 9.8° , 16.8° , 16.9° , 19.9° , and $23.5^{\circ} \pm 0.2$ in 2θ ; or
 - c) 9.7° , 9.8° , 11.7° , 15.1° , 16.8° , 16.9° , 19.9° , 23.5° , and $23.7^{\circ} \pm 0.2$ in 2θ .
12. The fumarate salt of any one of claims 1-5, wherein at least 90% by weight of the fumarate salt is single crystalline form D, and the X-ray powder diffraction pattern of the single crystalline form D is shown in Figure 10.
13. The fumarate salt of any one of claims 1-5 and 12, wherein at least 90% by weight of the fumarate salt is single crystalline form D, characterized by an X-ray powder diffraction pattern which comprises peaks at:
 - a) 9.6° , 12.8° , 16.0° , and $22.0^{\circ} \pm 0.2$ in 2θ ; or
 - b) 9.6° , 12.8° , 16.0° , 16.9° , 21.2° , and $22.0^{\circ} \pm 0.2$ in 2θ ; or
 - c) 9.6° , 12.8° , 16.0° , 16.9° , 20.8° , 21.2° , 21.5° , and $22.0^{\circ} \pm 0.2$ in 2θ .
 - d) 9.6° , 11.7° , 12.0° , 12.8° , 16.0° , 16.6° , 16.9° , 18.1° , 19.2° , 19.8° , 20.7° , 20.8° , 21.2° , 21.5° , 22.0° , 22.5° , 24.0° , 26.0° , and $29.8^{\circ} \pm 0.2$ in 2θ .

14. The fumarate salt of any one of claims 1-7, wherein at least 90% by weight of the fumarate salt is single crystalline form A, characterized by differential scanning calorimeter (DSC) peak phase transition temperatures of 112 °C and 158 °C.
15. The fumarate salt of any one of claims 1-5, 8, and 9, wherein at least 90% by weight of the fumarate salt is single crystalline form B, characterized by differential scanning calorimeter (DSC) peak phase transition temperatures of 58 °C and 162 °C.
16. The fumarate salt of any one of claims 1-5, 10, and 11, wherein at least 90% by weight of the fumarate salt is single crystalline form C, characterized by differential scanning calorimeter (DSC) peak phase transition temperatures of 62 °C and 156 °C.
17. The fumarate salt of any one of claims 1-5, 12, and 13, wherein at least 90% by weight of the fumarate salt is single crystalline form D, characterized by differential scanning calorimeter (DSC) peak phase transition temperature of 219°C.
18. A maleate salt of compound (I) represented by the following structural formula:



Compound (I)

- wherein the molar ratio between compound (I) and maleic acid is 1:1.
19. The maleate salt of claim 18, wherein at least 90% by weight of the salt is crystalline.
 20. The maleate salt of claim 18 or 19, wherein at least 90% by weight of the salt is in a single crystalline form.
 21. The maleate salt of any one of claims 18-20, wherein at least 99% by weight of the salt is crystalline.
 22. The maleate salt of any one of claims 18-21, wherein at least 99% by weight of the salt is in a single crystalline form.
 23. The maleate salt of any one of claims 18-22, wherein at least 90% by weight of the maleate salt is single crystalline form A, and the X-ray powder diffraction pattern of the single crystalline form A is shown in Figure 11.

24. The maleate salt of any one of claims 18-23, wherein at least 90% by weight of the maleate salt is single crystalline form A, characterized by an X-ray powder diffraction pattern which comprises peaks at:
- a) 11.5°, 12.6°, 14.9°, and 15.1° ± 0.2 in 2θ; or
 - b) 10.8°, 11.5°, 12.4°, 12.6°, 14.9°, 15.1°, and 17.1° ± 0.2 in 2θ; or
 - c) 5.8°, 10.8°, 11.5°, 12.4°, 12.6°, 14.9°, 15.1°, 17.1°, 18.6°, 23.5°, and 26.1° ± 0.2 in 2θ; or
 - d) 5.5°, 5.8°, 10.8°, 11.5°, 12.4°, 12.6°, 14.1°, 14.9°, 15.1°, 16.7°, 17.1°, 17.8°, 18.6°, 19.5°, 19.9°, 21.9°, 22.2°, 23.0°, 23.3°, 23.5°, 23.9°, and 26.1° ± 0.2 in 2θ.
25. The maleate salt of any one of claims 18-24, wherein at least 90% by weight of the maleate salt is single crystalline form A, characterized by differential scanning calorimeter (DSC) peak phase transition temperature of 219°C.
26. A pharmaceutical composition comprising the fumarate salt of any one of claims 1-17 or the maleate salt of any one of claims 18-25, and a pharmaceutically acceptable carrier or diluent, wherein at least 80% by weight of the salt is crystalline.
27. Use of a salt of any one of claims 1-25 or a pharmaceutically composition of claim 26 in the manufacture of a medicament for the treatment of cancer.
28. The use of claim 27, wherein the cancer is selected from the group consisting of lung cancer, breast cancer, colon cancer, neuroblastoma, prostate cancer, melanoma, glioblastoma multiforme, ovarian cancer, lymphoma, leukemia, osteosarcoma, germinoma, glioma, fibrosarcoma, gastrointestinal sarcoma, fibrous histiocytoma, round cell sarcoma, synovial sarcoma, cervical cancer, anogenital cancer, head and neck cancer, and oropharyngeal cancer.
29. The use of claim 28, wherein the cancer is selected from the group consisting of lung cancer, breast cancer and colon cancer.
30. The use of claim 29, wherein the cancer is breast cancer.