CLAIMS

1. Use of a compound 2-acetylnaphtho[2,3-b]furan-4,9-dione, an enantiomer, diastereomer, tautomer, salt, or solvate thereof in the manufacture of a medicament for the treatment of cancer or for prolonging progression free survival (PFS) in a cancer patient; wherein the purity of the compound is greater than or equal to 95.0%.

2. The use of claim 1, wherein the purity of the compound is greater than or equal to 99%.

3. The use of claim 1 or claim 2, wherein the compound comprises less than or equal to 0.2% of a single impurity.

4. The use of any one of claims 1 to 3, wherein the compound comprises ethyl acetate (EtOAc), toluene, ethanol, methanol, chloroform, CH_2CI_2, or hexane.

5. The use of any one of claims 1 to 4, wherein the compound comprises an amorphous state.

6. The use of any one of claims 1 to 5, wherein the compound comprises a crystalline state and an amorphous state.

7. The use of claim 1, wherein the cancer is selected from the group consisting of colorectal adenocarcinoma, breast cancer, ovarian cancer, head and neck cancer, melanoma, angiosarcoma, gastric adenocarinoma, pancreatic cancer, gastro-esophageal junction (GEJ) cancer, esophageal cancer, leukemia, lymphoma, multiple myeloma, brain tumor, hepatocellular carcinoma, lung cancer, prostate cancer, bile duct cancer, endometrial cancer, bladder cancer, renal cancer, and adrenocorticoid cancer.

8. The use of claim 7, wherein the cancer is colorectal adenocarcinoma.

9. The use of claim 7, wherein the cancer is ovarian cancer.

10. The use of claim 7, wherein the cancer is breast cancer.

11. The use of claim 7, wherein the cancer is lung cancer.

12. The use of claim 7, wherein the cancer is gastro-esophageal junction (GEJ) cancer.

13. The use of claim 7, wherein the cancer is hepatocellular carcinoma.

14. The use of claim 7, wherein the cancer is melanoma.

15. The use of claim 7, wherein the cancer is brain tumor.

16. The use of claim 7, wherein the cancer is leukemia, lymphoma, or multiple myeloma.

17. The use of claim 7, wherein the cancer is pancreatic cancer.

18. The use of claim 1, wherein the cancer is associated with overexpression of activated STAT3.