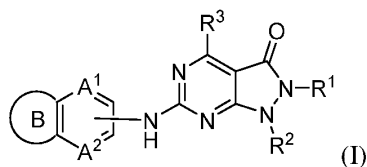


WHAT IS CLAIMED IS:

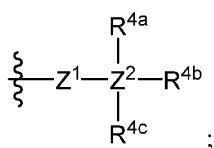
1. A compound of Formula (I), or a pharmaceutically acceptable salt thereof, having the structure:



wherein:

R^1 is selected from the group consisting of an optionally substituted C_{1-4} alkyl, an optionally substituted C_{2-4} alkenyl, an optionally substituted C_{2-4} alkynyl, an optionally substituted C_{3-6} cycloalkyl and an optionally substituted C_{3-6} cycloalkyl(C_{1-4} alkyl), wherein when substituted, the C_{1-4} alkyl, the C_{2-4} alkenyl and the C_{2-4} alkynyl are independently substituted with one or more substituents selected from the group consisting of halogen, C_{1-4} alkoxy, C_{1-4} haloalkyl, C_{1-4} haloalkoxy, cyano, amino, mono- C_{1-4} alkyl amine and di- C_{1-4} alkyl amine, and wherein the ring(s) of the C_{3-6} cycloalkyl and the C_{3-6} cycloalkyl(C_{1-4} alkyl) are independently substituted with one or more substituents selected from the group consisting of halogen, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} haloalkyl, C_{1-4} haloalkoxy, cyano, amino, mono- C_{1-4} alkyl amine and di- C_{1-4} alkyl amine;

R^2 is an optionally substituted aryl or an optionally substituted heteroaryl, wherein when the aryl or the heteroaryl are substituted, the aryl and the heteroaryl are independently substituted with one or more substituents selected from the group consisting of an



unsubstituted C_{1-4} alkyl and

R^3 is hydrogen or an unsubstituted C_{1-4} alkyl;

A^1 is CR^{6A} or N;

A^2 is CR^{6B} or N;

Z^1 is a single bond, $-C(=O)-$ or an optionally substituted C_{1-6} alkylene group, wherein one or two more methylene groups constituting the optionally substituted C_{1-6} alkylene group are independently optionally replaced by an oxygen atom or carbonyl group, and wherein

when the C₁₋₆ alkylene group is substituted, one or more methylene group are independently substituted with an unsubstituted C₁₋₆ alkyl group;

Z² is N or C, and when Z² is N, then R^{4c} is absent;

R^{4a} and R^{4b} are independently selected from the group consisting of hydrogen, halogen, cyano, hydroxy, an unsubstituted C₁₋₆ alkyl, an unsubstituted hydroxy(C₁₋₆ alkyl), an unsubstituted alkoxy(C₁₋₆ alkyl), an unsubstituted C₂₋₇ acyl, an unsubstituted -C-carboxy having 2-7 carbons, an unsubstituted -C-amido and an unsubstituted C₁₋₇ alkylsulfonyl; or

R^{4a} and R^{4b} together form an optionally substituted C₁₋₆ alkylene, wherein one or two more methylene groups constituting the C₁₋₆ alkylene group are independently optionally replaced by an oxygen atom, a sulfur atom, a sulfinyl group, a sulfonyl group, a carbonyl group or -(NR⁵)-, and wherein when the C₁₋₆ alkylene group is substituted, one or more methylene group are independently substituted with a substituent selected from the group consisting of halogen and an unsubstituted C₁₋₆ alkyl; or

R^{4a} and R^{4b} together with Z² form an unsubstituted monocyclic C₃₋₆ cycloalkyl and an unsubstituted 4-, 5-, or 6-membered heterocyclyl;

R^{4c} is selected from the group consisting of halogen, hydroxy, an unsubstituted C₁₋₆ alkyl and an unsubstituted hydroxy(C₁₋₆ alkyl);

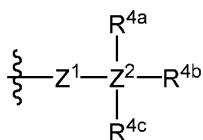
R⁵ is hydrogen, an unsubstituted C₁₋₆ alkyl or an unsubstituted C₁₋₆ haloalkyl;

R^{6A} and R^{6B} are independently hydrogen, halogen or an unsubstituted C₁₋₄ alkyl; and

Ring B is an optionally substituted monocyclic C₅₋₇ cycloalkyl, an optionally substituted 5-7 membered monocyclic heterocyclyl or an optionally substituted 7-10 membered bicyclic heterocyclyl, wherein when Ring B is substituted, Ring B is substituted with one or more substituents selected from the group consisting of halogen, an optionally substituted C₁₋₆ alkyl, an optionally substituted C₁₋₆ haloalkyl, an optionally substituted C₃₋₆ cycloalkyl, an optionally substituted aryl, an optionally substituted heteroaryl, an optionally substituted heterocyclyl, an optionally substituted aryl(C₁₋₆ alkyl), an optionally substituted heteroaryl(C₁₋₆ alkyl), an optionally substituted heterocyclyl(C₁₋₆ alkyl), an optionally substituted acyl, an optionally substituted -hydroxy(C₁₋₆ alkyl), an optionally substituted -C-amido, an optionally substituted -C-amido(C₁₋₆ alkyl), an optionally substituted -N-amido, an optionally substituted -N-amido(C₁₋₆ alkyl), an optionally substituted mono-substituted

amine, an optionally substituted di-substituted amine, an optionally substituted mono-substituted amine(C₁₋₆ alkyl), an optionally substituted di-substituted amine(C₁₋₆ alkyl) and an optionally substituted sulfonyl.

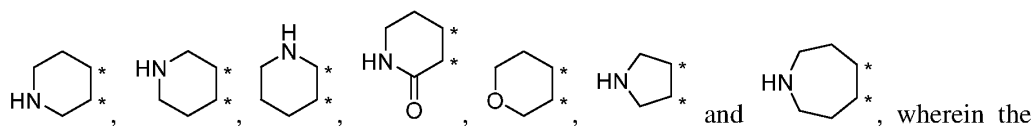
2. The compound of Claim 1, wherein R¹ is an optionally substituted C₁₋₄ alkyl.
3. The compound of Claim 1, wherein R¹ is an optionally substituted C₂₋₄ alkenyl.
4. The compound of Claim 1, wherein R¹ is an optionally substituted C₂₋₄ alkynyl.
5. The compound of Claim 1, wherein R¹ is an optionally substituted C₃₋₆ cycloalkyl.
6. The compound of Claim 1, wherein R¹ is an optionally substituted C₃₋₆ cycloalkyl(C₁₋₄ alkyl).
7. The compound of any one of Claims 1-6, wherein R² is an optionally substituted aryl.
8. The compound of any one of Claims 1-6, wherein R² is an optionally substituted heteroaryl.
9. The compound of any one of Claims 7-8, wherein R² is substituted with an unsubstituted C₁₋₄ alkyl.
10. The compound of any one of Claims 7-8, wherein R² is substituted with



11. The compound of Claim 10, wherein Z¹ is a single bond.
12. The compound of Claim 10, wherein Z¹ is -C(=O)-.
13. The compound of Claim 10, wherein Z¹ is an optionally substituted C₁₋₆ alkylene group, wherein one or two more methylene groups constituting the optionally substituted C₁₋₆ alkylene group are independently optionally replaced by an oxygen atom or carbonyl group, and wherein when the C₁₋₆ alkylene group is substituted, one or more methylene group are independently substituted with an unsubstituted C₁₋₆ alkyl group.
14. The compound of any one of Claims 10-13, wherein Z² is N.

15. The compound of any one of Claims 10-13, wherein Z^2 is C.
16. The compound of any one of Claims 10-16, wherein R^{4a} and R^{4b} are independently selected from the group consisting of hydrogen, halogen, cyano, hydroxy, an unsubstituted C_{1-6} alkyl, an unsubstituted hydroxy(C_{1-6} alkyl), an unsubstituted alkoxy(C_{1-6} alkyl), an unsubstituted C_{2-7} acyl, an unsubstituted -C-carboxy having 2-7 carbons, an unsubstituted -C-amido and an unsubstituted C_{1-7} alkylsulfonyl.
17. The compound of Claim 16, wherein R^{4a} and R^{4b} are independently hydroxy or an unsubstituted C_{1-6} alkyl.
18. The compound of Claim 16, wherein R^{4a} and R^{4b} are independently an unsubstituted C_{1-6} alkyl or an unsubstituted hydroxy(C_{1-6} alkyl).
19. The compound of Claim 16, wherein R^{4a} and R^{4b} are independently an unsubstituted C_{1-6} alkyl or an unsubstituted C_{1-7} alkylsulfonyl.
20. The compound of Claim 16, wherein R^{4a} and R^{4b} are each an unsubstituted C_{1-6} alkyl.
21. The compound of any one of Claims 10-16, wherein R^{4a} and R^{4b} together form an optionally substituted C_{1-6} alkylene, wherein one or two more methylene groups constituting the C_{1-6} alkylene group are independently optionally replaced by an oxygen atom, a sulfur atom, a sulfinyl group, a sulfonyl group, a carbonyl group or $-(NR^5)-$, and wherein when the C_{1-6} alkylene group is substituted, one or more methylene group are independently substituted with a substituent selected from halogen and an unsubstituted C_{1-6} alkyl.
22. The compound of any one of Claims 10-16, wherein R^{4a} and R^{4b} together with Z^2 form an unsubstituted monocyclic C_{3-6} cycloalkyl and an unsubstituted 4-, 5-, or 6-membered heterocyclyl.
23. The compound of any one of Claims 10-13 or 15-22, wherein R^{4c} is an unsubstituted C_{1-6} alkyl.
24. The compound of any one of Claims 1-23, wherein R^3 is hydrogen.
25. The compound of any one of Claims 1-23, wherein R^3 is an unsubstituted C_{1-4} alkyl.
26. The compound of any one of Claims 1-25, wherein A^1 is CR^{6A} .
27. The compound of Claim 26, wherein R^{6A} is hydrogen.

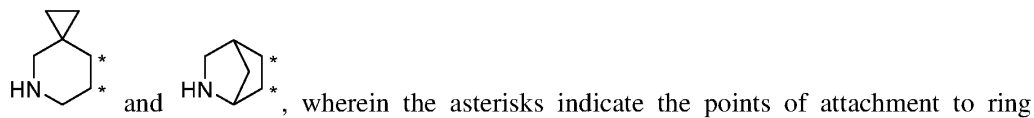
28. The compound of Claim 26, wherein R^{6A} is halogen.
29. The compound of Claim 26, wherein R^{6A} is an unsubstituted C_{1-4} alkyl.
30. The compound of any one of Claims 1-25, wherein A^1 is N.
31. The compound of any one of Claims 1-30, wherein A^2 is CR^{6B} .
32. The compound of Claim 31, wherein R^{6B} is hydrogen.
33. The compound of Claim 31, wherein R^{6B} is halogen.
34. The compound of Claim 31, wherein R^{6B} is an unsubstituted C_{1-4} alkyl.
35. The compound of any one of Claims 1-30, wherein A^2 is N.
36. The compound of any one of Claims 1-35, wherein Ring B is an optionally substituted monocyclic C_{5-7} cycloalkyl.
37. The compound of Claim 36, wherein Ring B is an optionally substituted monocyclic C_5 cycloalkyl.
38. The compound of Claim 36, wherein Ring B is an optionally substituted monocyclic C_6 cycloalkyl.
39. The compound of any one of Claims 1-35, wherein Ring B is an optionally substituted 5-7 membered monocyclic heterocyclyl.
40. The compound of Claim 39, wherein Ring B is selected from the group consisting of:

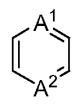


asterisks indicate the points of attachment to ring , wherein each ring can be optionally substituted at a ring carbon, and wherein each ring can be optionally substituted at a ring nitrogen.

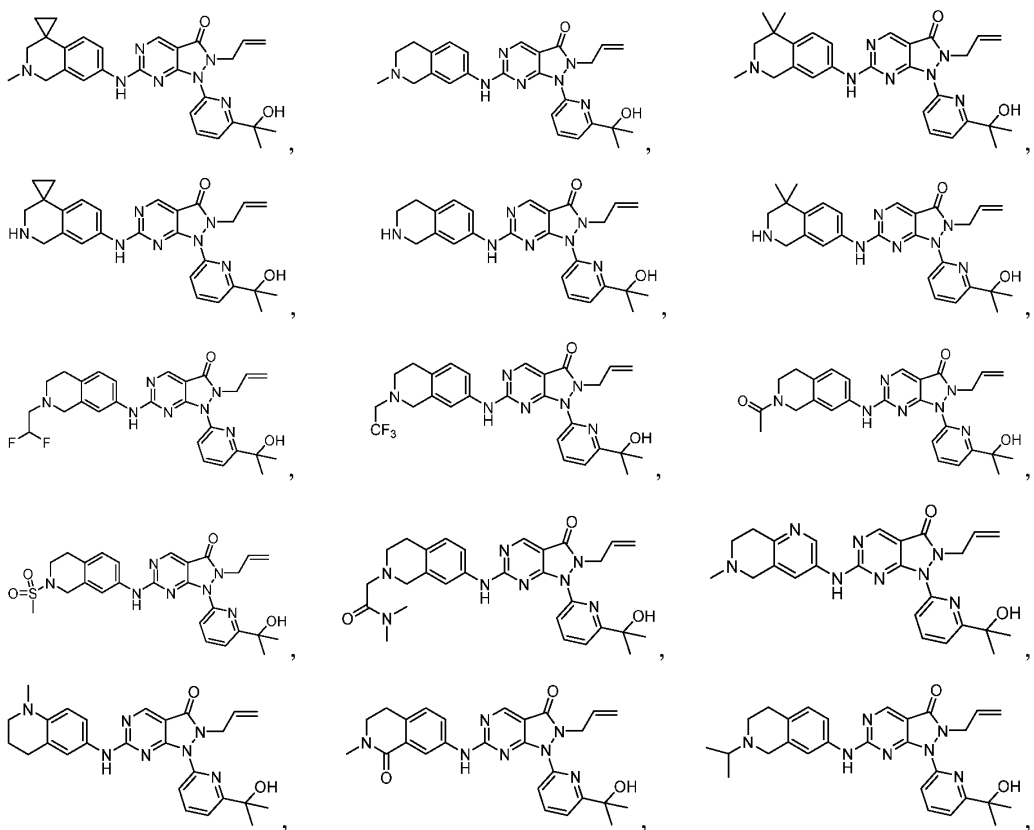
41. The compound of any one of Claims 1-35, wherein Ring B is an optionally substituted 7-10 membered bicyclic heterocyclyl.

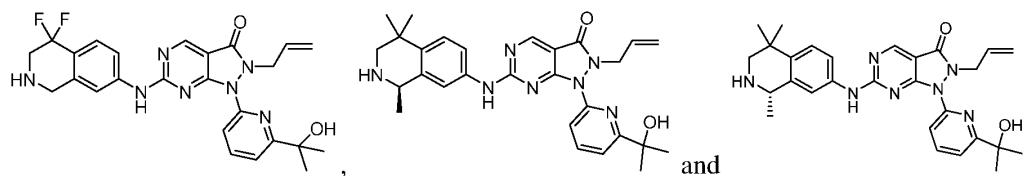
42. The compound of Claim 41, wherein Ring B is selected from the group consisting of:



, wherein each ring can be optionally substituted at a ring carbon, and wherein each ring can be optionally substituted at a ring nitrogen.

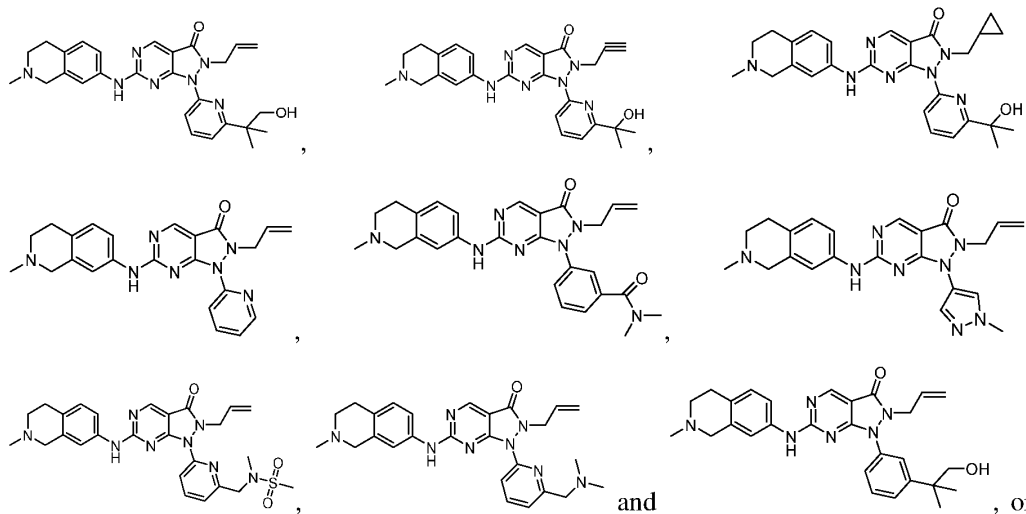
43. The compound of Claim 1, wherein the compound is selected from the group consisting of:





or a pharmaceutically acceptable salt of any of the foregoing.

44. The compound of Claim 1, wherein the compound is selected from the group consisting of:



a pharmaceutically acceptable salt of any of the foregoing.

45. A pharmaceutical composition comprising an effective amount of the compound of any one of any one of Claims 1-44, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier, diluent, excipient or combination thereof.

46. A method for ameliorating or treating a cancer comprising administering an effective amount of a compound of any one of Claims 1-44, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of Claim 45, to a subject having the cancer, wherein the cancer is selected from a brain cancer, a cervicocerebral cancer, an esophageal cancer, a thyroid cancer, a small cell cancer, a non-small cell cancer, a breast cancer, a lung cancer, a stomach cancer, a gallbladder/bile duct cancer, a liver cancer, a pancreatic cancer, a colon cancer, a rectal cancer, an ovarian cancer, a choriocarcinoma, an uterus body cancer, an uterocervical cancer, a renal pelvis/ureter cancer, a bladder cancer, a prostate cancer, a penis

cancer, a testicular cancer, a fetal cancer, Wilms' cancer, a skin cancer, malignant melanoma, a neuroblastoma, an osteosarcoma, an Ewing's tumor, a soft part sarcoma, an acute leukemia, a chronic lymphatic leukemia, a chronic myelocytic leukemia, polycythemia vera, a malignant lymphoma, multiple myeloma, a Hodgkin's lymphoma, and a non-Hodgkin's lymphoma.

47. A method for inhibiting replication of a malignant growth or a tumor comprising contacting the growth or the tumor with an effective amount of a compound of any one of Claims 1-44, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of Claim 45, wherein the malignant growth or tumor is due to a cancer selected from a brain cancer, a cervicocerebral cancer, an esophageal cancer, a thyroid cancer, a small cell cancer, a non-small cell cancer, a breast cancer, a lung cancer, a stomach cancer, a gallbladder/bile duct cancer, a liver cancer, a pancreatic cancer, a colon cancer, a rectal cancer, an ovarian cancer, a choriocarcinoma, an uterus body cancer, an uterocervical cancer, a renal pelvis/ureter cancer, a bladder cancer, a prostate cancer, a penis cancer, a testicular cancer, a fetal cancer, Wilms' cancer, a skin cancer, malignant melanoma, a neuroblastoma, an osteosarcoma, an Ewing's tumor, a soft part sarcoma, an acute leukemia, a chronic lymphatic leukemia, a chronic myelocytic leukemia, polycythemia vera, a malignant lymphoma, multiple myeloma, a Hodgkin's lymphoma, and a non-Hodgkin's lymphoma.

48. A method for ameliorating or treating a cancer comprising contacting a malignant growth or a tumor with an effective amount of a compound of any one of Claims 1-44, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of Claim 45, wherein the malignant growth or tumor is due to a cancer selected from a brain cancer, a cervicocerebral cancer, an esophageal cancer, a thyroid cancer, a small cell cancer, a non-small cell cancer, a breast cancer, a lung cancer, a stomach cancer, a gallbladder/bile duct cancer, a liver cancer, a pancreatic cancer, a colon cancer, a rectal cancer, an ovarian cancer, a choriocarcinoma, an uterus body cancer, an uterocervical cancer, a renal pelvis/ureter cancer, a bladder cancer, a prostate cancer, a penis cancer, a testicular cancer, a fetal cancer, Wilms' cancer, a skin cancer, malignant melanoma, a neuroblastoma, an osteosarcoma, an Ewing's tumor, a soft part sarcoma, an acute leukemia, a chronic lymphatic leukemia, a

chronic myelocytic leukemia, polycythemia vera, a malignant lymphoma, multiple myeloma, a Hodgkin's lymphoma, and a non-Hodgkin's lymphoma.

49. A method for inhibiting the activity of WEE1 comprising providing an effective amount of a compound of any one of Claims 1-44, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of Claim 45 to a cancer cell, wherein the cancer cell is from a cancer selected from a brain cancer, a cervicocerebral cancer, an esophageal cancer, a thyroid cancer, a small cell cancer, a non-small cell cancer, a breast cancer, a lung cancer, a stomach cancer, a gallbladder/bile duct cancer, a liver cancer, a pancreatic cancer, a colon cancer, a rectal cancer, an ovarian cancer, a choriocarcinoma, an uterus body cancer, an uterocervical cancer, a renal pelvis/ureter cancer, a bladder cancer, a prostate cancer, a penis cancer, a testicular cancer, a fetal cancer, Wilms' cancer, a skin cancer, malignant melanoma, a neuroblastoma, an osteosarcoma, an Ewing's tumor, a soft part sarcoma, an acute leukemia, a chronic lymphatic leukemia, a chronic myelocytic leukemia, polycythemia vera, a malignant lymphoma, multiple myeloma, a Hodgkin's lymphoma, and a non-Hodgkin's lymphoma.

50. A method for inhibiting the activity of WEE1 comprising providing an effective amount of a compound of any one of Claims 1-44, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of Claim 45 to a subject having a cancer or a cancer cell, wherein the cancer is selected from a brain cancer, a cervicocerebral cancer, an esophageal cancer, a thyroid cancer, a small cell cancer, a non-small cell cancer, a breast cancer, a lung cancer, a stomach cancer, a gallbladder/bile duct cancer, a liver cancer, a pancreatic cancer, a colon cancer, a rectal cancer, an ovarian cancer, a choriocarcinoma, an uterus body cancer, an uterocervical cancer, a renal pelvis/ureter cancer, a bladder cancer, a prostate cancer, a penis cancer, a testicular cancer, a fetal cancer, Wilms' cancer, a skin cancer, malignant melanoma, a neuroblastoma, an osteosarcoma, an Ewing's tumor, a soft part sarcoma, an acute leukemia, a chronic lymphatic leukemia, a chronic myelocytic leukemia, polycythemia vera, a malignant lymphoma, multiple myeloma, a Hodgkin's lymphoma, and a non-Hodgkin's lymphoma.

51. Use of an effective amount of a compound of any one of Claims 1-44, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of Claim 45 in the

manufacture of a medicament for ameliorating or treating a cancer, wherein the cancer is selected from a brain cancer, a cervicocerebral cancer, an esophageal cancer, a thyroid cancer, a small cell cancer, a non-small cell cancer, a breast cancer, a lung cancer, a stomach cancer, a gallbladder/bile duct cancer, a liver cancer, a pancreatic cancer, a colon cancer, a rectal cancer, an ovarian cancer, a choriocarcinoma, an uterus body cancer, an uterocervical cancer, a renal pelvis/ureter cancer, a bladder cancer, a prostate cancer, a penis cancer, a testicular cancer, a fetal cancer, Wilms' cancer, a skin cancer, malignant melanoma, a neuroblastoma, an osteosarcoma, an Ewing's tumor, a soft part sarcoma, an acute leukemia, a chronic lymphatic leukemia, a chronic myelocytic leukemia, polycythemia vera, a malignant lymphoma, multiple myeloma, a Hodgkin's lymphoma, and a non-Hodgkin's lymphoma.

52. Use of an effective amount of a compound of any one of Claims 1-44, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of Claim 45 in the manufacture of a medicament for inhibiting replication of a malignant growth or a tumor, wherein the malignant growth or tumor is due to a cancer selected from a brain cancer, a cervicocerebral cancer, an esophageal cancer, a thyroid cancer, a small cell cancer, a non-small cell cancer, a breast cancer, a lung cancer, a stomach cancer, a gallbladder/bile duct cancer, a liver cancer, a pancreatic cancer, a colon cancer, a rectal cancer, an ovarian cancer, a choriocarcinoma, an uterus body cancer, an uterocervical cancer, a renal pelvis/ureter cancer, a bladder cancer, a prostate cancer, a penis cancer, a testicular cancer, a fetal cancer, Wilms' cancer, a skin cancer, malignant melanoma, a neuroblastoma, an osteosarcoma, an Ewing's tumor, a soft part sarcoma, an acute leukemia, a chronic lymphatic leukemia, a chronic myelocytic leukemia, polycythemia vera, a malignant lymphoma, multiple myeloma, a Hodgkin's lymphoma, and a non-Hodgkin's lymphoma.

53. Use of an effective amount of a compound of any one of Claims 1-44, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of Claim 45 in the manufacture of a medicament for ameliorating or treating a malignant growth or tumor, wherein the malignant growth or tumor is due to a cancer selected from a brain cancer, a cervicocerebral cancer, an esophageal cancer, a thyroid cancer, a small cell cancer, a non-small cell cancer, a breast cancer, a lung cancer, a stomach cancer, a gallbladder/bile duct cancer, a liver cancer, a pancreatic cancer, a colon cancer, a rectal cancer, an ovarian cancer,

a choriocarcinoma, an uterus body cancer, an uterocervical cancer, a renal pelvis/ureter cancer, a bladder cancer, a prostate cancer, a penis cancer, a testicular cancer, a fetal cancer, Wilms' cancer, a skin cancer, malignant melanoma, a neuroblastoma, an osteosarcoma, an Ewing's tumor, a soft part sarcoma, an acute leukemia, a chronic lymphatic leukemia, a chronic myelocytic leukemia, polycythemia vera, a malignant lymphoma, multiple myeloma, a Hodgkin's lymphoma, and a non-Hodgkin's lymphoma.