WHAT IS CLAIMED IS:

1. Use of a ubiquitin-specific-processing protease (USP1) inhibitor in the manufacture of a medicament for treating cancer in a subject who previously received treatment with a first poly ADP-ribose polymerase (PARP) inhibitor, wherein the medicament is to be administered in combination with a second PARP inhibitor, wherein the first and the second PARP inhibitors are the same or different PARP inhibitors, optionally wherein the subject is a human.

2. The use of claim 1, wherein the subject was not previously administered a USP1 inhibitor, and/or wherein the treatment with the first PARP inhibitor was interrupted or discontinued, and optionally wherein the interruption was for at least one week, at least two weeks, at least three weeks, or at least four weeks.

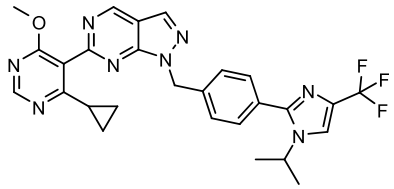
3. The use of claim1 or 2, wherein during treatment with the first PARP inhibitor, the dose of the first PARP inhibitor was reduced, and/or wherein the subject experienced unacceptable toxicity and/or unacceptable adverse reactions during treatment with the first PARP inhibitor, optionally wherein the unacceptable toxicity or adverse reaction was a hematological toxicity such as thrombocytopenia, anemia, or neutropenia, pneumonitis, dyspnea, fever, cough, wheezing, a radiological abnormality, hypertension, myelodysplastic syndrome/acute myeloid leukemia (MDS/AML), nausea, and/or fatigue.

4. The use of any one of claims 1-3, wherein the first PARP inhibitor, and/or the second PARP inhibitor, is olaparib, niraparib, talazoparib, or rucaparib.

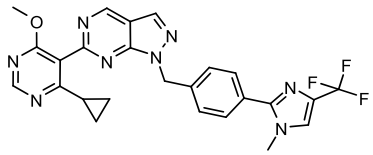
5. The use of any one of claims 1-4, wherein the dose of the second PARP inhibitor is reduced compared to the dose of first PARP inhibitor.

6. The use of any one of claims 1-5, wherein the USP1 inhibitor is a compound selected from the group consisting of

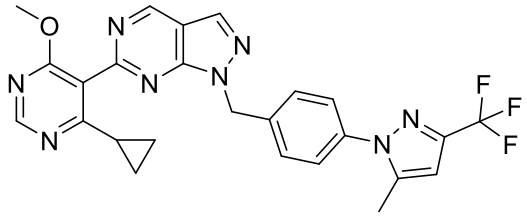
(a) Formula I:



(b) Formula II:



(c) Formula III:



and pharmaceutically acceptable salts, hydrates, solvates, amorphous solids, or polymorphs thereof.

7. The use of any one of claims 1-6, wherein the USP1 inhibitor and the second PARP inhibitor are well tolerated.

8. The use of any one of claims 1-7, wherein the USP1 inhibitor and the second PARP inhibitor inhibit rebounding and/or regrowth of the cancer.

9. The use of any one of claims 1-8, wherein the USP1 inhibitor and the second PARP inhibitor are to be administered sequentially or simultaneously.

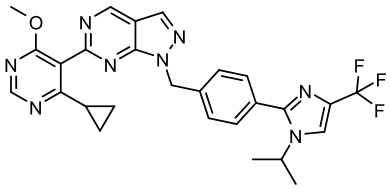
10. The use of any one of claims 1-9, wherein the cancer is selected from the group consisting of hematological cancer, lymphatic cancer, brain cancer, lung cancer, non-small cell lung cancer (NSCLC), colon cancer, bladder cancer, osteosarcoma, ovarian cancer (optionally wherein the the ovarian cancer is a BRCA1 mutant cancer, a BRCA2 mutant cancer, or a p53 mutant cancer, or combinations thereof), skin cancer, uterine cancer, peritoneal cancer, and endometrial cancer, breast cancer (optionally wherein the breast cancer is a triple negative breast cancer (TNBC)), a

BRCA1 mutant cancer, a BRCA2 mutant cancer, or a BRCA1 mutant and BRCA2 mutant cancer.

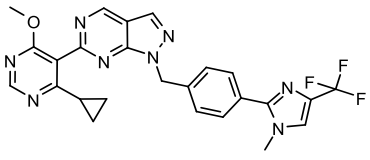
11. The use of any one of claims 1-10, wherein the cancer is a PARP inhibitor resistant or refractory cancer and/or wherein the cancer is selected from the group consisting of a DNA damage repair pathway deficient cancer, a homologous-recombination deficient cancer, a cancer comprising cancer cells with a mutation in a gene encoding p53, a cancer comprising cancer cells with a loss of function mutation in a gene encoding p53, and a cancer comprising cells with a mutation in the gene encoding ATM.

12. Use of (i) a ubiquitin-specific-processing protease 1 (USP1) inhibitor and (ii) a poly ADP-ribose polymerase (PARP) inhibitor, or a pharmaceutically acceptable salt, hydrate, solvate, amorphous solid, or polymorph thereof, in the manufacture of a medicament for delaying, reducing, or preventing rebounding of a tumor, and/or treating a cancer in a subject, wherein the USP1 inhibitor is a compound selected from the group consisting of

(a) Formula I:

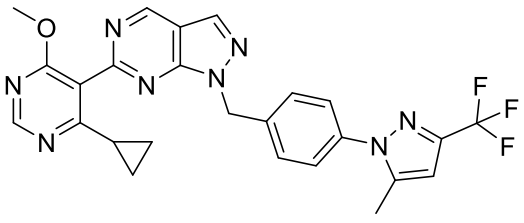


(b) Formula II:



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(c) Formula III:



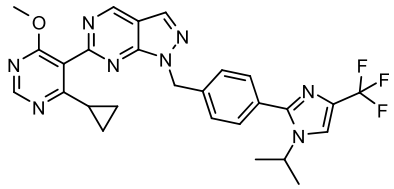
and pharmaceutically acceptable salts, hydrates, solvates, amorphous solids, or polymorphs thereof, optionally wherein said PARP inhibitor is selected from the group consisting of niraparib, olaparib and pharmaceutically acceptable salts, hydrates, solvates, amorphous solids, or polymorphs thereof.

13. The use of claim12, wherein the administration of the USP1 inhibitor, or said pharmaceutically acceptable salt, hydrate, solvate, amorphous solid, or polymorph thereof, and said PARP inhibitor, or said pharmaceutically acceptable salt, hydrate, solvate, amorphous solid, or polymorph thereof, provides a synergistic effect, and/or wherein said USP1 inhibitor, or said pharmaceutically acceptable salt, hydrate, solvate, amorphous solid, or polymorph thereof, and said PARP inhibitor, or said pharmaceutically acceptable salt, hydrate, solvate, amorphous solid, or polymorph thereof, are to be administered in an amount effective to reduce the toxicity effects of a PARP inhibitor administered as a monotherapy.

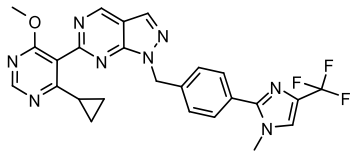
14. The use of claim 12 or 13, wherein the USP1 inhibitor, or said pharmaceutically acceptable salt, hydrate, solvate, amorphous solid, or polymorph thereof, and said PARP inhibitor, or said pharmaceutically acceptable salt, hydrate, solvate, amorphous solid, or polymorph thereof, are to be administered sequentially, or simultaneously, and/or wherein the USP1 inhibitor and/or the PARP inhibitor is to be administered at a dose that is not effective as a single agent.

15. A pharmaceutical combination composition comprising (i) a ubiquitin-specific-processing protease 1 (USP1) inhibitor and (ii) a poly ADP-ribose polymerase (PARP) inhibitor, or a pharmaceutically acceptable salt, hydrate, solvate, amorphous solid, or polymorph thereof, wherein the USP1 inhibitor is a compound selected from the group consisting of

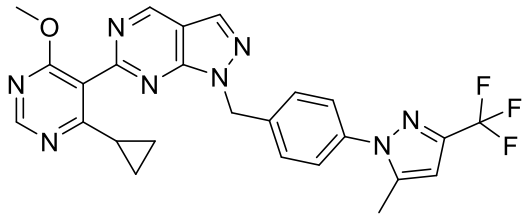
(a) Formula I:



(b) Formula II:



(c) Formula III:



and pharmaceutically acceptable salts, hydrates, solvates, amorphous solids, or polymorphs thereof, optionally wherein said PARP inhibitor is selected from the group consisting of niraparib, olaparib, and pharmaceutically acceptable salts, hydrates, solvates, amorphous solids, or polymorphs thereof, optionally wherein the pharmaceutical combination composition is used for the manufacture of a medicament for treatment of cancer.

16. A kit comprising the pharmaceutical composition of claim 15, and instructions for administration of the combination to a subject having cancer.

17. The use or the pharmaceutical combination composition of any one of claims 12-15, or the kit of claim 16, wherein the cancer is a PARP inhibitor resistant or refractory cancer, and/or wherein the cancer is selected from the group consisting of a hematological cancer, a lymphatic cancer, a DNA damage repair pathway deficient cancer, a homologous-recombination deficient cancer, a

cancer comprising cancer cells with a mutation in a gene encoding p53, a cancer comprising cancer cells with a loss of function mutation in a gene encoding p53, and a cancer comprising cancer cells with a mutation in a gene encoding ATM.

18. The use, pharmaceutical combination composition, or kit of any one of claims 12-17, wherein the cancer is selected from the group consisting of hematological cancer, lymphatic cancer, brain cancer, lung cancer, non-small cell lung cancer (NSCLC), colon cancer, bladder cancer, osteosarcoma, ovarian cancer, skin cancer, uterine cancer, peritoneal cancer, and endometrial cancer, and breast cancer (optionally wherein the cancer is a triple negative breast cancer).

19. The use, pharmaceutical combination composition, or kit of any one of claims 12-18, wherein the cancer is a BRCA1 mutant cancer, a BRCA2 mutant cancer, or a BRCA1 mutant cancer and a BRCA2 mutant cancer.

20. Use of the pharmaceutical combination composition of claim 15 in the manufacture of a medicament for treating a USP1 protein mediated disorder and/or a PARP protein mediated disorder wherein the medicament is to be administered in an effective amount to treat the USP1 protein mediated disorder and/or the PARP protein mediated disorder.

21. A method of inhibiting a USP1 protein and/or a PARP protein comprising contacting a USP1 protein and/or a PARP protein with the pharmaceutical combination composition of claim 15 wherein the contacting occurs *in vitro* or *in vivo*.