CLAIMS

1. A method of treating a cancer, comprising co-administering, to a human subject in need thereof, one or more compositions comprising therapeutically effective amount of (1) an MDM2 inhibitor or a pharmaceutically acceptable salt thereof, and (2) a Bruton's tyrosine kinase (BTK) inhibitor or a pharmaceutically acceptable salt thereof.

2. The method of Claim 1, wherein the MDM2 inhibitor is administered before administration of the BTK inhibitor.

3. The method of Claim 1, wherein the MDM2 inhibitor is administered concurrently with the administration of the BTK inhibitor.

4. The method of Claim 1, wherein the MDM2 inhibitor is administered to the subject after administration of the BTK inhibitor.

5. The method of any one of Claims 1 to 4, wherein the MDM2 inhibitor is selected from the group consisting of the compounds listed in Table 1 or a pharmaceutically-acceptable salt thereof.

6. The method of Claim 5, wherein the therapeutically effective amount of the MDM2 inhibitor is selected from the group consisting of 5 mg, 10 mg, 12.5 mg, 15 mg, 20 mg, 25 mg, 50 mg, 60 mg, 70 mg, 75 mg, 100 mg, 120 mg, 125 mg, 140 mg, 150 mg, 175 mg, 180 mg, 200 mg, 210 mg, 225 mg, 240 mg, 250 mg, 275 mg, 280 mg, 300 mg, 325 mg, 350 mg, 360 mg, 375 mg, 400 mg, 420 mg, 425 mg, 450 mg, 475 mg, 480 mg, 490 mg, 500 mg, 525 mg, 540 mg, 550 mg, 560 mg, 600 mg, 630 mg, and 700 mg.

7. The method of any one of Claims 1 to 4, wherein the BTK inhibitor is selected from the group consisting of the compounds listed in Table 2 or pharmaceutically-acceptable salt thereof.

8. The method of Claim 7, wherein the therapeutically effective amount of the BTK inhibitor is selected from the group consisting of 5 mg, 10 mg, 12.5 mg, 15 mg, 20 mg, 25 mg, 50 mg, 60 mg, 70 mg, 75 mg, 100 mg, 120 mg, 125 mg, 140 mg, 150 mg, 175 mg, 180 mg, 200 mg, 210 mg, 225 mg, 240 mg, 250 mg, 275 mg, 280 mg, 300 mg, 325 mg, 350 mg, 360 mg, 375 mg, 400 mg, 420 mg, 425 mg, 450 mg, 475 mg, 480 mg, 490 mg, 500 mg, 525 mg, 540 mg, 550 mg, 560 mg, 600 mg, 630 mg, and 700 mg.

9. The method of any one of Claims 1 to 8, wherein the cancer is a B cell hematological malignancy.

10. The method of Claim 9, wherein the B cell hematological malignancy is selected from the group consisting of chronic lymphocytic leukemia (CLL), small lymphocytic leukemia (SLL), non-Hodgkin's lymphoma (NHL), diffuse large B cell lymphoma (DLBCL), follicular lymphoma (FL), mantle cell lymphoma (MCL), Hodgkin's lymphoma, B cell acute lymphoblastic leukemia (B-ALL), Burkitt's lymphoma, and Waldenström's macroglobulinemia (WM).

11. The method of any one of Claims 1 to 8, wherein the cancer is selected from the group consisting of myelofibrosis, multiple myeloma, and acute myeloid leukemia.

12. A pharmaceutical composition comprising therapeutically effective amounts of an MDM2 inhibitor or a pharmaceutically acceptable salt thereof, and (2) a Bruton's tyrosine kinase (BTK) inhibitor or a pharmaceutically acceptable salt thereof, for use in the treatment of cancer.

13. The pharmaceutical composition of Claim 12, wherein the MDM2 inhibitor is any one of the compounds selected from Table 1 or a pharmaceutically-acceptable salt thereof.

14. The pharmaceutical composition of Claim 13, wherein the therapeutically effective amount of the MDM2 inhibitor is selected from the group consisting of 5 mg, 10 mg, 12.5 mg, 15 mg, 20 mg, 25 mg, 50 mg, 60 mg, 70 mg, 75 mg, 100 mg, 120 mg, 125 mg, 140 mg, 150 mg, 175 mg, 180 mg, 200 mg, 210 mg, 225 mg, 240 mg, 250 mg, 275 mg, 280 mg, 300 mg, 325 mg, 350 mg, 360 mg, 375 mg, 400 mg, 420 mg, 425 mg, 450 mg, 475 mg, 480 mg, 490 mg, 500 mg, 525 mg, 540 mg, 550 mg, 560 mg, 600 mg, 630 mg, and 700 mg.

15. The pharmaceutical composition of Claim 12, wherein the BTK inhibitor is any one of the compounds selected from Table 2 or a pharmaceutically-acceptable salt thereof.

16. The pharmaceutical composition of Claim 15, wherein the therapeutically effective amount of the BTK inhibitor is selected from the group consisting of 5 mg, 10 mg, 12.5 mg, 15 mg, 20 mg, 25 mg, 50 mg, 60 mg, 70 mg, 75 mg, 100 mg, 120 mg, 125 mg, 140 mg, 150 mg, 175 mg, 180 mg, 200 mg, 210 mg, 225 mg, 240 mg, 250 mg, 275 mg, 280 mg, 300 mg, 325 mg, 350 mg, 360 mg, 375 mg, 400 mg, 420 mg, 425 mg, 450 mg, 475 mg, 480 mg, 490 mg, 500 mg, 525 mg, 540 mg, 550 mg, 560 mg, 600 mg, 630 mg, and 700 mg.

17. The pharmaceutical composition of any one of Claims 12 to 16, wherein the cancer is a B cell hematological malignancy.

18. The pharmaceutical composition of Claim 17, wherein the B cell hematological malignancy is selected from the group consisting of chronic lymphocytic leukemia (CLL), small lymphocytic leukemia (SLL), non-Hodgkin's lymphoma (NHL), diffuse large B cell lymphoma (DLBCL), follicular lymphoma (FL), mantle cell lymphoma (MCL), Hodgkin's lymphoma, B cell acute lymphoblastic leukemia (B-ALL), Burkitt's lymphoma, and Waldenström's macroglobulinemia (WM).

19. The method of any of claims 12 to 16, wherein the cancer is selected from the group consisting of myelofibrosis, multiple myeloma, and acute myeloid leukemia.

20. A combination comprising a Bruton's tyrosine kinase (BTK) inhibitor and an MDM2 inhibitor, or pharmaceutically acceptable salts thereof.

21. The combination of Claim 20 in the form of a pharmaceutical composition.

22. The combination of Claim 20 in the form of a kit comprising two or more pharmaceutical compositions and optionally a package insert or label providing directions for administering the pharmaceutical compositions simultaneously, separately or sequentially, wherein the two or more pharmaceutical compositions together comprise an MDM2 inhibitor and a BTK inhibitor or pharmaceutically acceptable salts thereof.

23. The combination of any one of Claims 20 to 22 wherein the MDM2 inhibitor is a compound selected from any of the compounds in Table 1 or a pharmaceutically acceptable salt thereof.

24. The combination of Claim 23, wherein the therapeutically effective amount of the MDM2 inhibitor is selected from the group consisting of 5 mg, 10 mg, 12.5 mg, 15 mg, 20 mg, 25 mg, 50 mg, 60 mg, 70 mg, 75 mg, 100 mg, 120 mg, 125 mg, 140 mg, 150 mg, 175 mg, 180 mg, 200 mg, 210 mg, 225 mg, 240 mg, 250 mg, 275 mg, 280 mg, 300 mg, 325 mg, 350 mg, 360 mg, 375 mg, 400 mg, 420 mg, 425 mg, 450 mg, 475 mg, 480 mg, 490 mg, 500 mg, 525 mg, 540 mg, 550 mg, 560 mg, 600 mg, 630 mg, and 700 mg.

25. The combination of any one of Claims 20 to 22 wherein the BTK inhibitor is a compound selected from any of the compounds in Table 2 or a pharmaceutically acceptable salt thereof.

26. The combination of Claim 25, wherein the therapeutically effective amount of the BTK inhibitor is selected from the group consisting of 5 mg, 10 mg, 12.5 mg, 15 mg, 20 mg, 25 mg, 50 mg, 60 mg, 70 mg, 75 mg, 100 mg, 120 mg, 125 mg, 140 mg, 150 mg, 175 mg, 180 mg, 200 mg, 210 mg, 225 mg, 240

mg, 250 mg, 275 mg, 280 mg, 300 mg, 325 mg, 350 mg, 360 mg, 375 mg, 400 mg, 420 mg, 425 mg, 450 mg, 475 mg, 480 mg, 490 mg, 500 mg, 525 mg, 540 mg, 550 mg, 560 mg, 600 mg, 630 mg, and 700 mg.

27. The combination of any one of Claims 20 to 26 for use in the treatment of a cancer.

28. The combination of Claim 27, wherein the cancer is a B cell hematological malignancy.

29. The combination of Claim 27, wherein the B cell hematological malignancy is selected from the group consisting of chronic lymphocytic leukemia (CLL), small lymphocytic leukemia (SLL), non-Hodgkin's lymphoma (NHL), diffuse large B cell lymphoma (DLBCL), follicular lymphoma (FL), mantle cell lymphoma (MCL), Hodgkin's lymphoma, B cell acute lymphoblastic leukemia (B-ALL), Burkitt's lymphoma, and Waldenström's macroglobulinemia (WM).

30. The method of claim 27, wherein the cancer is selected from the group consisting of myelofibrosis, multiple myeloma, and acute myeloid leukemia.