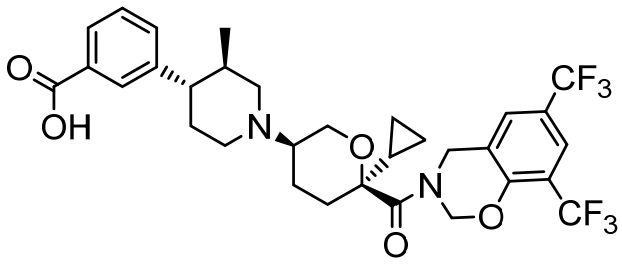
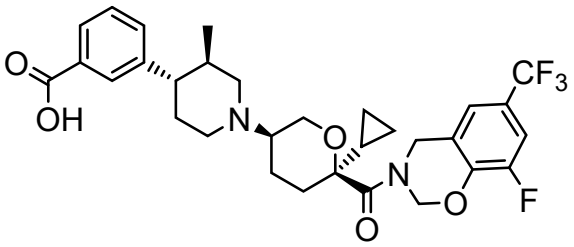
CLAIMS

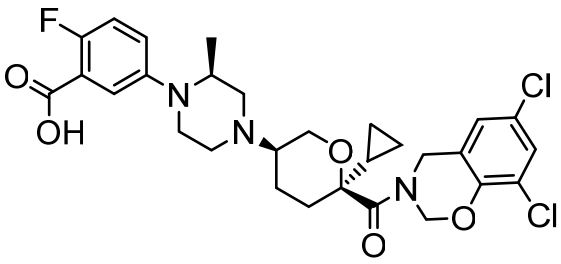
1. Use of a CCR2 chemokine receptor antagonist and a PD-1 and/or PD-L1 inhibitor in the preparation of a medicament for treating colorectal cancer in a mammal, wherein the CCR2 chemokine receptor antagonist is to be administered in combination, concomitantly or sequentially with the PD-1 and/or PD-L1 inhibitor, and wherein the CCR2 chemokine receptor antagonist has a formula selected from the group consisting of



(Compound 1),



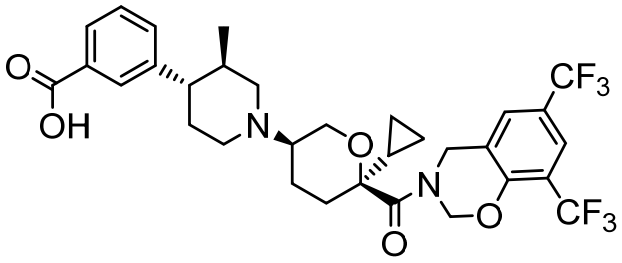
(Compound 2), and



(Compound 3),

or a pharmaceutically acceptable salt thereof.

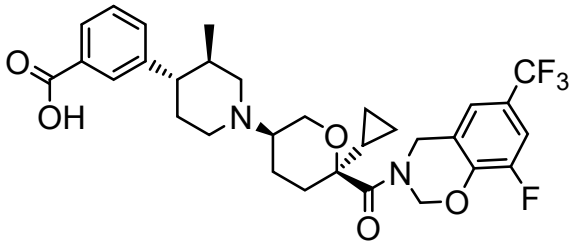
2. The use of claim **1**, wherein said CCR2 chemokine receptor antagonist has the formula



(Compound 1)

or a pharmaceutically acceptable salt thereof.

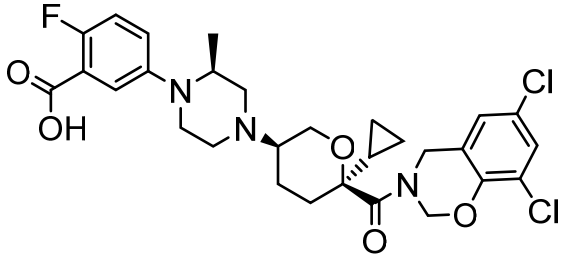
3. The use of claim **1**, wherein said CCR2 chemokine receptor antagonist has the formula



(Compound 2)

or a pharmaceutically acceptable salt thereof.

4. The use of claim **1**, wherein said CCR2 chemokine receptor antagonist has the formula



(Compound 3)

or a pharmaceutically acceptable salt thereof.

5. The use of any one of claims **1** to **4**, wherein said PD-1 and/or PD-L1 inhibitor is a PD-1 inhibitor.

6. The use of claim **5**, wherein the PD-1 inhibitor is selected from the group consisting of pembrolizumab, nivolumab, IBI-308, mDX-400, BGB-108, MEDI-0680, SHR-1210, PF-06801591, PDR-001, GB-226, and STI-1110.

7. The use of claim **5**, wherein the PD-1 inhibitor is selected from the group consisting of nivolumab, pembrolizumab, and pidilizumab.

8. The use of any one of claims **1** to **4**, wherein said PD-1 and/or PD-L1 inhibitor is a PD-L1 inhibitor.

9. The use of claim **8**, wherein the PD-L1 inhibitor is selected from the group consisting of durvalumab, atezolizumab, avelumab, BMS-936559, ALN-PDL, TSR-042, KD-033, CA-170, CA-327, STI-1014, and KY-1003.

10. The use of any one of claims **1** to **9**, wherein the CCR2 chemokine receptor antagonist and the PD-1 inhibitor and/or the PD-L1 inhibitor are to be administered concomitantly.

11. The use of claim **10**, wherein the CCR2 chemokine receptor antagonist, and the PD-1 inhibitor and/or the PD-L1 inhibitor are to be administered in a combination formulation.

12. The use of any one of claims **1** to **9**, wherein the CCR2 chemokine receptor antagonist, and the PD-1 inhibitor and/or the PD-L1 inhibitor are to be administered sequentially.

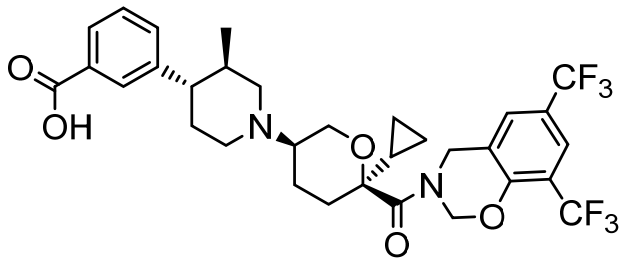
13. The use of claim **12**, wherein the CCR2 chemokine receptor antagonist is to be administered prior to administration of the PD-1 inhibitor and/or the PD-L1 inhibitor.

14. The use of claim **12**, wherein the CCR2 chemokine receptor antagonist is to be administered after the administration of the PD-1 inhibitor and/or the PD-L1 inhibitor.

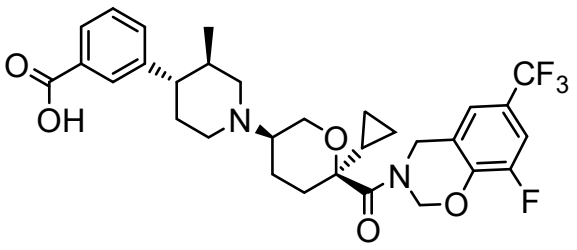
15. The use of any one of claims **1** to **14**, wherein the CCR2 chemokine receptor antagonist is to be administered orally and the PD-1 inhibitor and/or the PD-L1 inhibitor is to be administered intravenously.

16. The use of any one of claims **1** to **15**, wherein the mammal is a human subject.

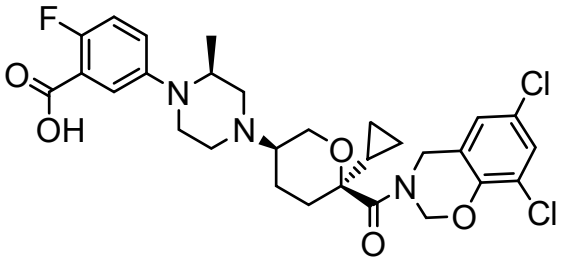
17. Use of a CCR2 chemokine receptor antagonist and a PD-1 inhibitor and/or a PD-L1 inhibitor in the manufacture of a kit for treating a subject having a colorectal cancer, wherein the CCR2 chemokine receptor antagonist has a formula selected from the group consisting of



(Compound 1),



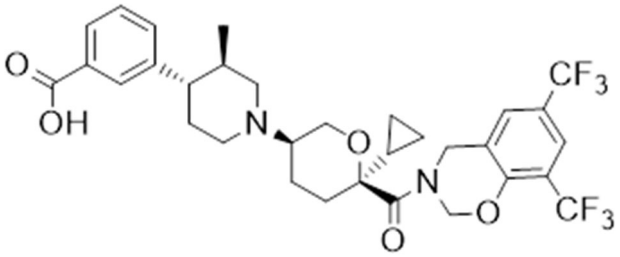
(Compound 2), and



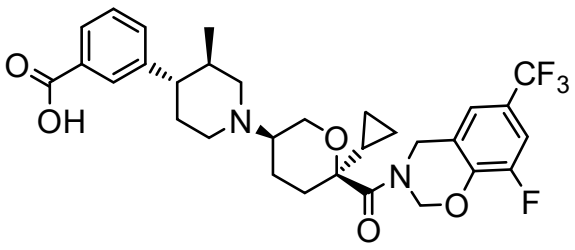
(Compound 3),

or a pharmaceutically acceptable salt thereof.

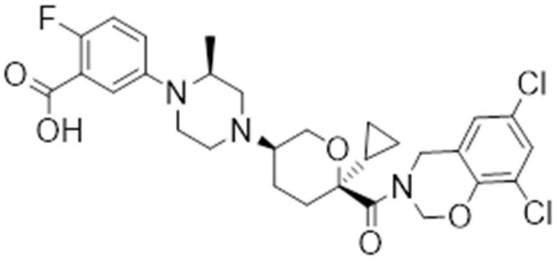
18. Use of a CCR2 chemokine receptor antagonist and a PD-1 inhibitor and/or a PD-L1 inhibitor in the manufacture of a medicament, included in a kit, for treating a subject having colorectal cancer, wherein the CCR2 chemokine receptor antagonist has a formula selected from the group consisting of



(Compound 1),



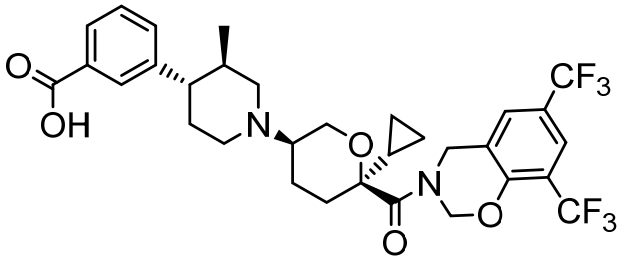
(Compound 2), and



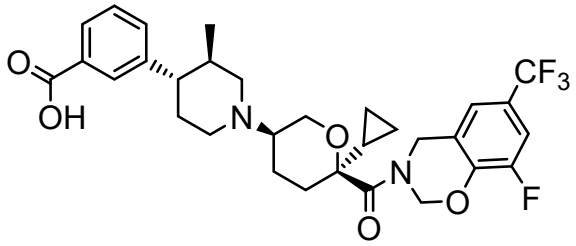
(Compound 3),

or a pharmaceutically acceptable salt thereof.

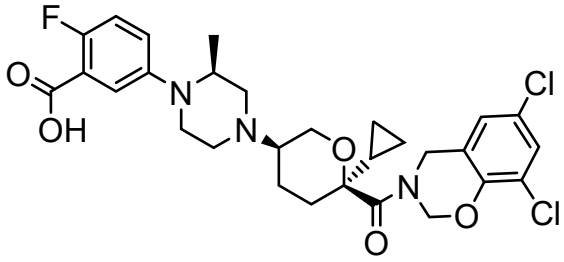
19. Use of a CCR2 chemokine receptor antagonist in the preparation of a medicament for treating colorectal cancer in a mammal, wherein the CCR2 chemokine receptor antagonist is to be administered in combination, concomitantly, or sequentially with a PD-1 and/or PD-L1 inhibitor, and wherein the CCR2 chemokine receptor antagonist has a formula selected from the group consisting of



(Compound 1),



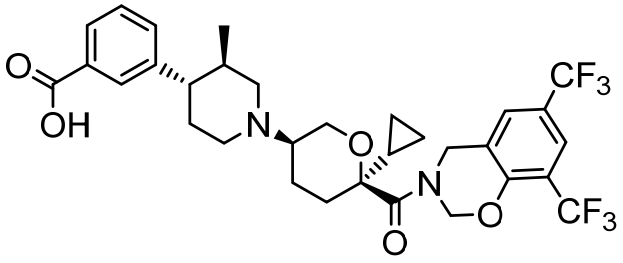
(Compound 2), and



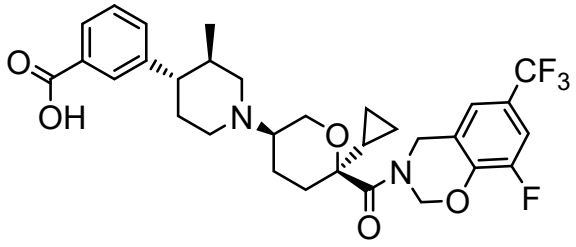
(Compound 3),

or a pharmaceutically acceptable salt thereof.

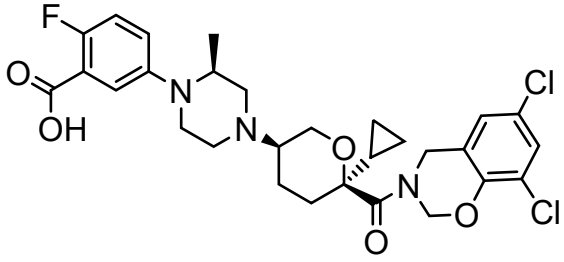
20. Use of a PD-1 and/or PD-L1 inhibitor in the preparation of a medicament for treating colorectal cancer in a mammal, wherein the PD-1 and/or PD-L1 inhibitor is to be administered in combination, concomitantly, or sequentially with a CCR2 chemokine receptor antagonist, and wherein the CCR2 chemokine receptor antagonist has a formula selected from the group consisting of



(Compound 1),



(Compound 2), and

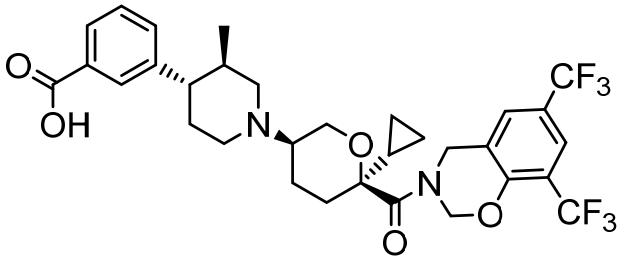


(Compound 3),

or a pharmaceutically acceptable salt thereof.

21. The use of claim **19** or claim **20**, wherein the medicament is included in a kit.

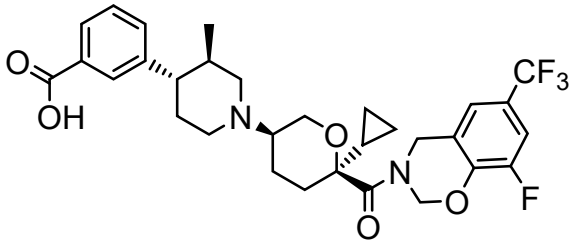
22. The use of any one of claims **17** to **21**, wherein said CCR2 chemokine receptor antagonist has the formula



(Compound 1)

or a pharmaceutically acceptable salt thereof.

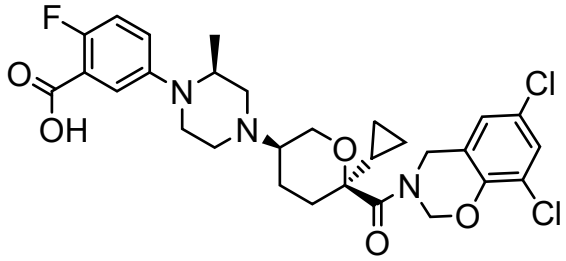
23. The use of any one of claims **17** to **21**, wherein said CCR2 chemokine receptor antagonist has the formula



(Compound 2)

or a pharmaceutically acceptable salt thereof.

24. The use of any one of claims **17** to **21**, wherein said CCR2 chemokine receptor antagonist has the formula



(Compound 3)

or a pharmaceutically acceptable salt thereof.

25. The use of any one of claims **17** to **24**, wherein said PD-1 and/or PD-L1 inhibitor is a PD-1 inhibitor.

26. The use of claim **25**, wherein the PD-1 inhibitor is selected from the group consisting of pembrolizumab, nivolumab, IBI-308, mDX-400, BGB-108, MEDI-0680, SHR-1210, PF-06801591, PDR-001, GB-226, and STI-1110.

27. The use of claim **25**, wherein the PD-1 inhibitor is selected from the group consisting of nivolumab, pembrolizumab, and pidilizumab.

28. The use of any one of claims **17** to **24**, wherein said PD-1 and/or PD-L1 inhibitor is a PD-L1 inhibitor.

29. The use of claim **28**, wherein the PD-L1 inhibitor is selected from the group consisting of durvalumab, atezolizumab, avelumab, BMS-936559, ALN-PDL, TSR-042, KD-033, CA-170, CA-327, STI-1014, and KY-1003.

30. The use of any one of claims **17** to **29**, wherein the CCR2 chemokine receptor antagonist and the PD-1 inhibitor and/or the PD-L1 inhibitor are formulated for concomitant administration.

31. The use of any one of claims **17** to **29**, wherein the CCR2 chemokine receptor antagonist and the PD-1 inhibitor and/or the PD-L1 inhibitor are formulated for sequential administration.