CLAIMS

1. Use of an immunoconjugate which binds to FOLR1 polypeptide in the manufacture of a medicament for the treatment of a FOLR1-expressing cancer in a patient, wherein the immunoconjugate comprises an antibody or antigen-binding fragment thereof that comprises the variable light chain (VL) complementarity determining regions (CDR)-1 of SEQ ID NO: 6, the VL CDR-2 of SEQ ID NO: 7, the VL CDR-3 of SEQ ID NO: 8, the variable heavy chain (VH) CDR-1 of SEQ ID NO: 9, the VH CDR-2 of SEQ ID NO: 11, and the VH CDR-3 of SEQ ID NO: 12, and a maytansinoid, and wherein the medicament is formulated for administration at a dose of 6 milligrams (mg) per kilogram (kg) of adjusted ideal body weight (AIBW) of the patient.

2. The use of claim 1, wherein the immunoconjugate is administered once every three weeks.

3. The use of claim 1, wherein the immunoconjugate is administered once every week.

4. The use of any one of claims 1-3, wherein the antibody or antigen-binding fragment thereof comprises the VH CDR-2 of SEQ ID NO:10.

5. The use of any one of claims 1-3, wherein the antibody or antigen-binding fragment thereof comprises a variable heavy chain domain comprising SEQ ID NO: 3 and a variable light chain domain comprising SEQ ID NO: 4 or SEQ ID NO: 5.

6. The use of any one of claims 1-3, wherein the antibody or antigen-binding fragment thereof comprises a variable heavy chain domain comprising SEQ ID NO: 3 and a variable light chain domain comprising SEQ ID NO: 5.

7. The use of any one of claims 1-3, wherein the antibody or antigen-binding fragment thereof comprises a full-length heavy chain amino acid sequence comprising SEQ ID NO: 13 and a full-length light chain amino acid sequence comprising SEQ ID NO: 15.

8. The use of any one of claims 1-4, wherein the antibody comprises (i) a heavy chain comprising the same amino acid sequence as the amino acid sequence of the heavy chain encoded by the plasmid deposited with the American Type Culture Collection (ATCC) as PTA-10772 and (ii) a light chain comprising the same amino acid sequence

as the amino acid sequence of the light chain encoded by the plasmid deposited with the ATCC as PTA-10774.

9. The use of any one of claims 1-8, wherein the immunoconjugate comprises 1-10 maytansinoid molecules.

10. The use of any one of claims 1-9, wherein the immunoconjugate comprises 2-5 maytansinoid molecules.

11. The use of any one of claims 1-10, wherein the immunoconjugate comprises 3-4 maytansinoid molecules.

12. The use of any one of claims 1-11, wherein the maytansinoid is DM4.

13. The use of any one of claims 1-12, wherein the immunoconjugate comprises the linker sulfo-SPDB.

14. The use of any one of claims 1-13, wherein the immunoconjugate comprises DM4 and an antibody comprising (i) a heavy chain comprising the same amino acid sequence as the amino acid sequence of the heavy chain encoded by the plasmid deposited with the American Type Culture Collection (ATCC) as PTA-10772 and (ii) a light chain comprising the same amino acid sequence as the amino acid sequence of the light chain encoded by the plasmid deposited with the ATCC as PTA-10774, and wherein the DM4 is linked to the antibody by sulfo-SPDB.

15. The use of any one of claims 1-13, wherein the immunoconjugate comprises DM4 and an antibody comprising (i) a heavy chain comprising the amino acid sequence of SEQ ID NO: 13 and (ii) a light chain comprising the amino acid sequence of SEQ ID NO: 15, and wherein the DM4 is linked to the antibody by sulfo-SPDB.

16. The use of any one of claims 1-15, wherein the immunoconjugate is formulated for IV administration.

17. The use of any one of claims 1-16, wherein said cancer is ovarian cancer or cancer of the peritoneum.

18. The use of claim 17, wherein the cancer is cancer of the peritoneum.

19. The use of claim 17, wherein the ovarian cancer is epithelial ovarian cancer.

20. The use of claim 19, wherein the ovarian cancer is platinum resistant, relapsed, or refractory.

21. The use of any one of claims 1-16, wherein said cancer is endometrial cancer.

22. The use of any one of claims 1-16, wherein said cancer is uterine cancer.

23. The use of any one of claims 1-22, wherein a sample obtained from the patient exhibits FOLR1 expression as measured by immunohistochemistry (IHC).

24. The use of claim 23, wherein the sample has a staining intensity of at least 2 hetero.

25. The use of claim 23, wherein the sample has a staining intensity of at least 2 homo.

26. The use of claim 23, wherein the sample has a staining intensity of at least 3 hetero.

27. The use of claim 23, wherein the sample has a staining intensity of at least 3 homo.

28. The use of any one of claims 1-27, further comprising administering a steroid to the patient.

29. The use of claim 28, wherein the steroid is dexamethasone.

30. The use of any one of claims 1-17, 19, 20 and 23-29 when dependent on claim 17, wherein the cancer is ovarian cancer and wherein the administration results in a decrease in CA125.

31. The use of any one of claims 1-30, wherein the administration results in a decrease in toxicity.

32. The use of claim 31, wherein the toxicity is ocular toxicity.

33. The use of any one of claims 1-32, wherein the patient is human.

34. Use of a composition comprising an immunoconjugate which binds to FOLR1 polypeptide in the manufacture of a medicament for the treatment of a FOLR1-expressing cancer in a patient, wherein the immunoconjugate comprises an antibody or antigen-binding fragment thereof that comprises the variable light chain (VL)

complementarity determining regions (CDR)-1 of SEQ ID NO: 6, the VL CDR-2 of SEQ ID NO: 7, the VL CDR-3 of SEQ ID NO: 8, the variable heavy chain (VH) CDR-1 of SEQ ID NO: 9, the VH CDR-2 of SEQ ID NO: 11, and the VH CDR-3 of SEQ ID NO: 12, and a maytansinoid, and wherein the medicament is formulated for administration at a dose of 6 milligrams (mg) per kilogram (kg) of adjusted ideal body weight (AIBW) of the patient, wherein the composition comprises an average of about 1 to about 10 maytansinoids per antibody or antigen-binding fragment.

35. The use of claim 34, wherein the composition is administered once every three weeks.

36. The use of claim 34, wherein the composition is administered once every week.

37. The use of any one of claims 34-36, wherein the antibody or antigen-binding fragment thereof comprises the VH CDR-2 of SEQ ID NO:10.

38. The use of any one of claims 34-36, wherein the antibody or antigen-binding fragment thereof comprises a variable heavy chain domain comprising SEQ ID NO: 3 and a variable light chain domain comprising SEQ ID NO: 4 or SEQ ID NO: 5.

39. The use of any one of claims 34-36, wherein the antibody or antigen-binding fragment thereof comprises a variable heavy chain domain comprising SEQ ID NO: 3 and a variable light chain domain comprising SEQ ID NO: 5.

40. The use of any one of claims 34-36, wherein the antibody or antigen-binding fragment thereof comprises a full-length heavy chain amino acid sequence comprising SEQ ID NO: 13 and a full-length light chain amino acid sequence comprising SEQ ID NO: 15.

41. The use of any one of claims 34-39, wherein the antibody comprises (i) a heavy chain comprising the same amino acid sequence as the amino acid sequence of the heavy chain encoded by the plasmid deposited with the American Type Culture Collection (ATCC) as PTA-10772 and (ii) a light chain comprising the same amino acid sequence as the amino acid sequence of the light chain encoded by the plasmid deposited with the ATCC as PTA-10774.

42. The use of any one of claims 34-41, wherein the immunoconjugate comprises an average of about 2-5 maytansinoids.

43. The use of any one of claims 34-42, wherein the immunoconjugate comprises an average of about 3-4 maytansinoids.

44. The use of any one of claims 34-43, wherein the maytansinoid is DM4.

45. The use of any one of claims 34-44, wherein the immunoconjugate comprises the linker sulfo-SPDB.

46. The use of any one of claims 34-45, wherein the immunoconjugate comprises DM4 and an antibody comprising (i) a heavy chain comprising the same amino acid sequence as the amino acid sequence of the heavy chain encoded by the plasmid deposited with the American Type Culture Collection (ATCC) as PTA-10772 and (ii) a light chain comprising the same amino acid sequence as the amino acid sequence of the light chain encoded by the plasmid deposited with the ATCC as PTA-10774, and wherein the DM4 is linked to the antibody by sulfo-SPDB.

47. The use of any one of claims 34-45, wherein the immunoconjugate comprises DM4 and an antibody comprising (i) a heavy chain comprising the amino acid sequence of SEQ ID NO: 13 and (ii) a light chain comprising the amino acid sequence of SEQ ID NO: 15, and wherein the DM4 is linked to the antibody by sulfo-SPDB.

48. The use of any one of claims 34-47, wherein the immunoconjugate is formulated for IV administration.

49. The use of any one of claims 34-47, wherein said cancer is ovarian cancer or cancer of the peritoneum.

50. The use of claim 49, wherein the cancer is cancer of the peritoneum.

51. The use of claim 49, wherein the ovarian cancer is epithelial ovarian cancer.

52. The use of claim 51, wherein the ovarian cancer is platinum resistant, relapsed, or refractory.

53. The use of any one of claims 34-47, wherein said cancer is endometrial cancer.

54. The use of any one of claims 34-47, wherein said cancer is uterine cancer.

55. The 4 use of any one of claims 34-54, wherein a sample obtained from the patient exhibits FOLR1 expression as measured by immunohistochemistry (IHC).

56. The use of claim 55, wherein the sample has a staining intensity of at least 2 hetero.

57. The use of claim 55, wherein the sample has a staining intensity of at least 2 homo.

58. The use of claim 55, wherein the sample has a staining intensity of at least 3 hetero.

59. The use of claim 55, wherein the sample has a staining intensity of at least 3 homo.

60. The use of any one of claims 34-59, further comprising administering a steroid to the patient.

61. The use of claim 60, wherein the steroid is dexamethasone.

62. The use of any one of claims 34-49, 51, 52 and 55-61, wherein the cancer is ovarian cancer and wherein the administration results in a decrease in CA125.

63. The use of any one of claims 34-62, wherein the administration results in a decrease in toxicity.

64. The use of claim 63, wherein the toxicity is ocular toxicity.

65. The use of any one of claims 34-64, wherein the patient is human.

66. Use of a composition comprising an immunoconjugate which binds to FOLR1 polypeptide in the manufacture of a medicament for the treatment of a FOLR1-expressing ovarian cancer or cancer of the peritoneum in a human patient, wherein the medicament is formulated for administration every three weeks at a dose of 6 milligrams (mg) per kilogram (kg) of adjusted ideal body weight (AIBW) of the patient; wherein the immunoconjugate comprises DM4 and an antibody comprising (i) a heavy chain comprising the same amino acid sequence as the amino acid sequence of the heavy chain encoded by the plasmid deposited with the American Type Culture Collection (ATCC) as PTA-10772 and (ii) a light chain comprising the same amino acid sequence as the amino acid sequence of the light chain encoded by the plasmid deposited with the ATCC as PTA-10774, and wherein the DM4 is linked to the antibody by sulfo-SPDB;

wherein the composition comprises an average of about 3 to about 4 maytansinoids per antibody;

wherein the composition is formulated for IV administration;

wherein a sample obtained from the patient exhibits FOLR1 expression as measured by immunohistochemistry (IHC).

67. Use of an immunoconjugate which binds to FOLR1 polypeptide in the manufacture of a medicament for the treatment of a FOLR1-expressing ovarian cancer or cancer of the peritoneum in a human patient, wherein the medicament is formulated for administration every three weeks at a dose of 6 milligrams (mg) per kilogram (kg) of adjusted ideal body weight (AIBW) of the patient;

wherein the immunoconjugate comprises DM4 and an antibody comprising (i) a heavy chain comprising the same amino acid sequence as the amino acid sequence of the heavy chain encoded by the plasmid deposited with the American Type Culture Collection (ATCC) as PTA-10772 and (ii) a light chain comprising the same amino acid sequence as the amino acid sequence of the light chain encoded by the plasmid deposited with the ATCC as PTA-10774, and wherein the DM4 is linked to the antibody by sulfo-SPDB;

wherein the immunoconjugate comprises 3-4 maytansinoid molecules;

wherein the immunoconjugate is formulated for IV administration;

wherein a sample obtained from the patient exhibits FOLR1 expression as measured by immunohistochemistry (IHC).