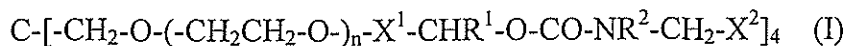
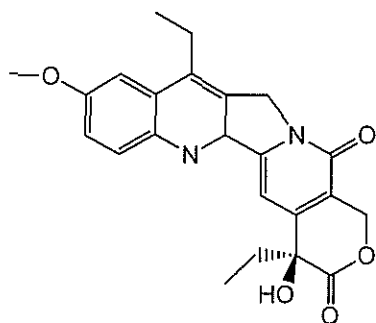


CLAIMS

1. A pharmaceutical composition for use in cancer treatment comprising, as an active ingredient, a compound represented by the following formula I:



wherein X^1 -CHR¹-O-CO-NR² represents a linker, X¹ represents a spacer, R¹ represents a C1-C4 alkyl group that may be substituted, R² represents a phenyl group or a substituted phenyl group, X² is a group represented by the following formula II:



(II)

and n is an integer of 200 to 1,000,

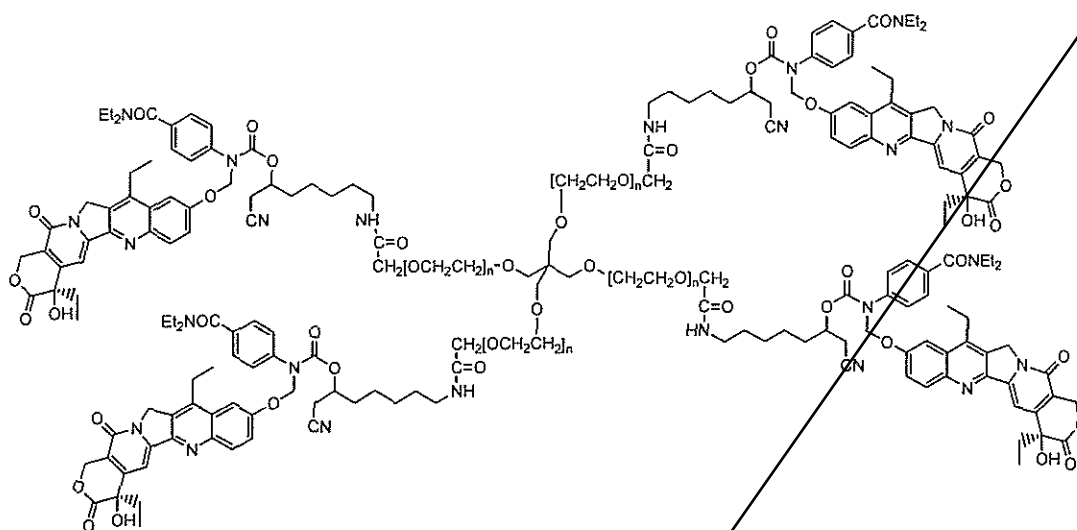
wherein the pharmaceutical composition is usable with administration and dosage in which a single dose of about 0.01 $\mu\text{mol/kg}$ body weight to about 11 $\mu\text{mol/kg}$ body weight is parenterally administered to a subject having cancer at a frequency of once a week, every other week over at least 2 weeks, and has no Irinotecan-like side effects and provides a cancer growth inhibiting activity equivalent to or larger than that of Irinotecan when used at a dose as low as 1/10 (in a molar ratio) or less as compared with Irinotecan.

2. The composition according to claim 1, wherein R^1 , R^2 , X^2 and n are as defined above and X^1 is $(CH_2)_{1-5}$ -CONH- $(CH_2)_{1-20}$ or $(CH_2)_{1-5}$ -NHCO- $(CH_2)_{1-20}$ in the compound of the formula I.

3. The composition according to claim 1 or 2, wherein X¹, X² and n are as defined above, R¹ is a methyl group, an ethyl group, a substituted methyl group, or a substituted ethyl group, and R² is a substituted phenyl group in the compound of the formula I.

4. ~~The composition according to claim 2 or 3, wherein X¹ and X² are as defined above, R¹ is a substituted methyl group, R² is a 4-substituted phenyl group, and n is an integer of 200 to 800 in the compound of the formula I.~~

5. The composition according to claim 4, wherein the compound of the formula I is a compound represented by the following formula III:



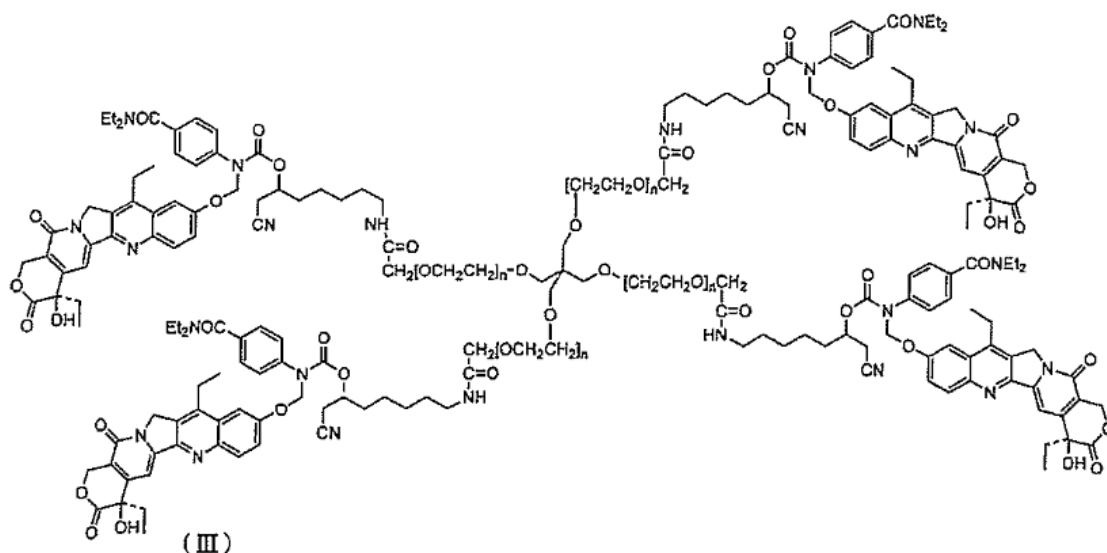
(III)

where n is as defined above.

6. The composition according to any one of claims 1 to 5, wherein the cancer is selected from the group consisting of colon cancer, breast cancer, ovarian cancer, cervical cancer, uterine cancer, lung cancer, stomach cancer, pancreas cancer, esophageal cancer, head and neck cancer, hepatocellular carcinoma, gallbladder cancer, biliary cancer, sarcoma, and malignant lymphoma.
7. A method for treating a cancer comprising parenterally administering the composition according to any one of claims 1 to 5 to a subject having cancer at a single dose of the compound of about $0.01 \mu\text{mol/kg}$ body weight to about $11 \mu\text{mol/kg}$ body weight at a frequency of once a week, every other week over at least 2 weeks, wherein no Irinotecan-like side effects including serious diarrhea and leukopenia and/or neutropenia are seen and a cancer growth inhibiting activity equivalent to or larger than that of Irinotecan is provided when the dose is as low as $1/10$ (in a molar ratio) or less as compared with Irinotecan.
8. The method according to claim 7, wherein the cancer is selected from the group consisting of colon cancer, breast cancer, ovarian cancer, cervical cancer, uterine cancer, lung cancer, stomach cancer, pancreas cancer, esophageal cancer, head and neck cancer, hepatocellular carcinoma, gallbladder cancer, biliary cancer, sarcoma, and malignant lymphoma.
9. The method according to claim 7 or 8, wherein the parenteral administration is the intravenous administration.
10. The method according to claim 9, wherein the intravenous administration is infusion or bolus injection.

CLAIMS

1. A pharmaceutical composition for use in cancer treatment comprising, as an active ingredient, a compound represented by the following formula III:



(wherein n is an integer of 200 to 1,000),

wherein the compound is used with administration and dosage in which a single dose of 0.01 $\mu\text{mol/kg}$ body weight to 11 $\mu\text{mol/kg}$ body weight is parenterally administered to a subject having cancer and the compound can be administered at a frequency of once a week, every other week over at least 2 weeks, and has no Irinotecan-like side effects and provides a cancer growth inhibiting activity equivalent to or larger than that of Irinotecan when used at a dose as low as 1/10 (in a molar ratio) or less as compared with Irinotecan.

2. The composition according to claim 1, wherein n is an integer of 200 to 800 in the compound of the formula III.
3. The composition according to claim 1 or 2, wherein the cancer is selected from the group consisting of colon cancer, breast cancer, ovarian cancer, cervical cancer, uterine cancer, lung cancer, stomach cancer, pancreas cancer, esophageal cancer, head and neck cancer, hepatocellular carcinoma, gallbladder cancer, biliary cancer, sarcoma, and malignant lymphoma.

4. The composition according to any one of claims 1 to 3, wherein the parenteral administration is the intravenous administration.
5. The composition according to claim 4, wherein the intravenous administration is infusion or bolus injection.