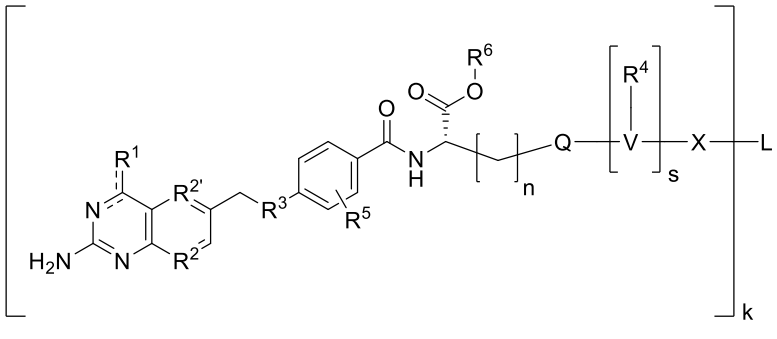
CLAIMS

1. A linker-drug compound of formula (I)



(**I**),

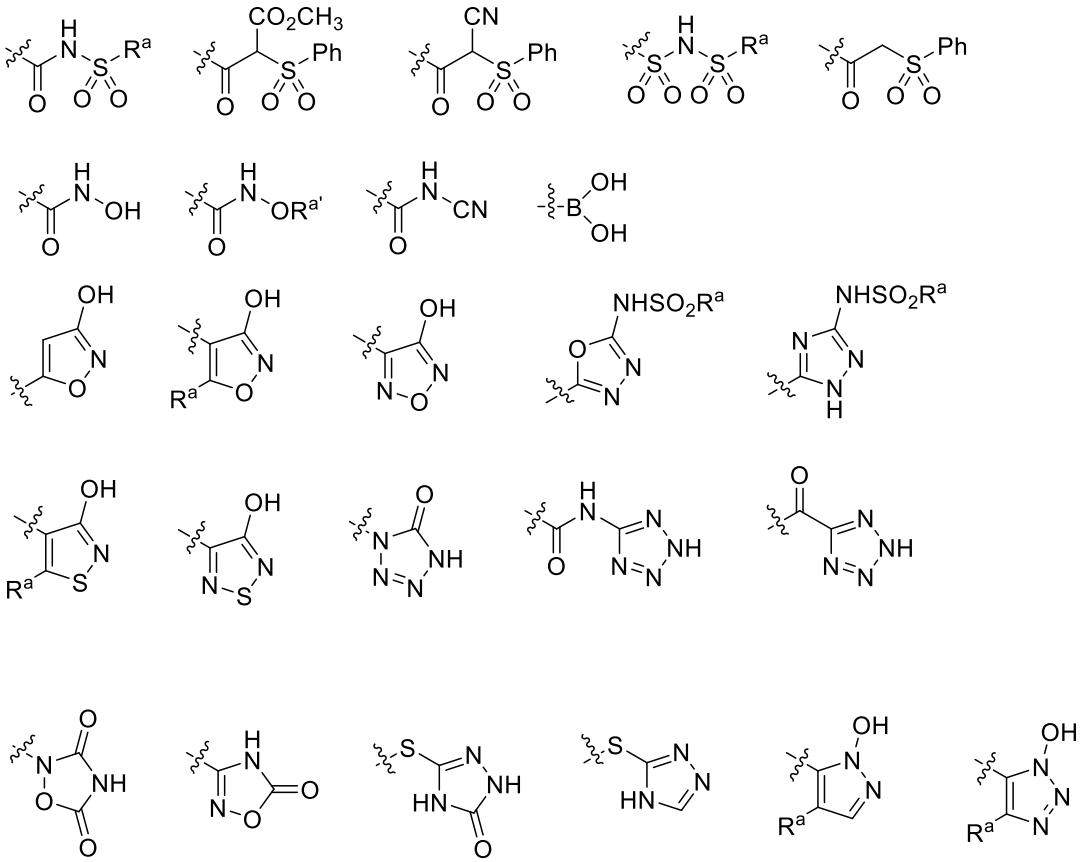
wherein

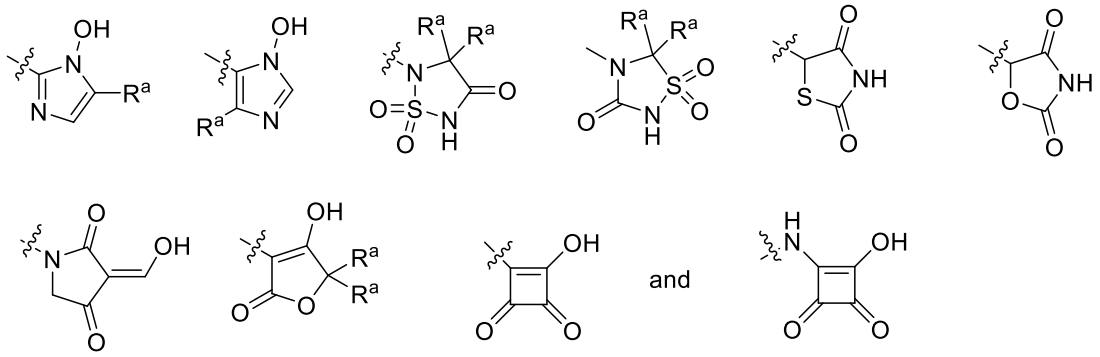
R^1 is O, NH_2 or OH;

R^2 and $R^{2'}$ are independently N, CH or CMe;

R^3 is NH, N(C_{1-5} alkyl), CH_2, CH(C_{1-5} alkyl), CH(C_{2-4} alkenyl), CH(C_{2-4} alkynyl), or CH(C_{1-4} alkoxyl);

R^4 is H, halogen, -COOH, OH, NH_2, -$CONH_2$, -CONHR, -$CONHR_2$, C_{1-4} alkyl, C_{1-4} alkoxyl, benzyloxy, tetrazole, -SO_3H, -OSO_3H, -PO_3H_2, -OPO_3H_2, -CN, or azido, wherein R is selected from H and C_{1-5} alkyl, or R^4 is a carboxylic acid bioisostere selected from the group consisting of





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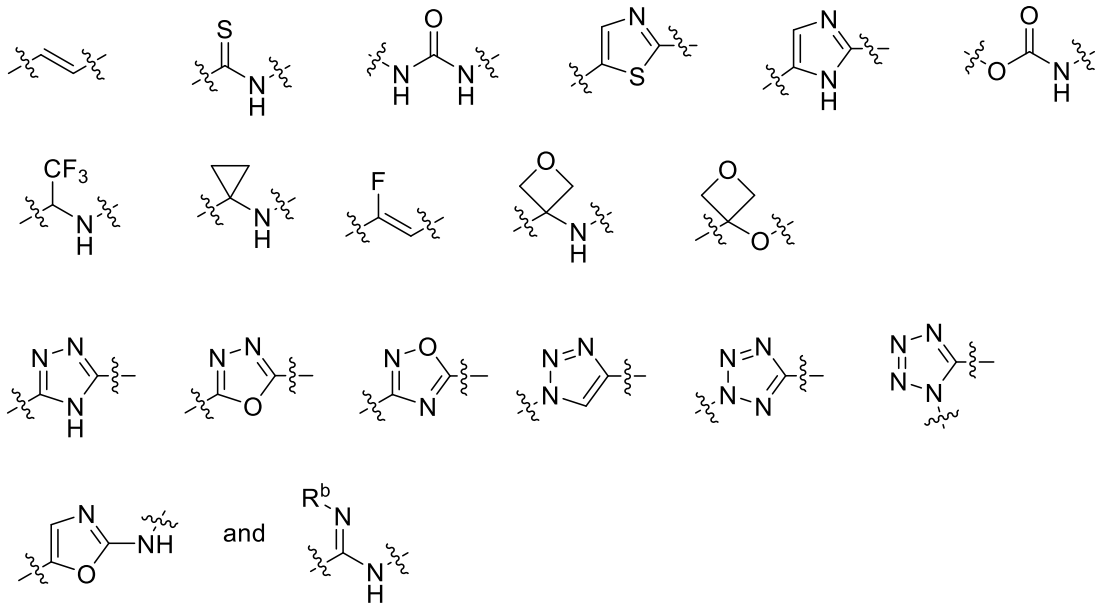
wherein R^{a}' is selected from H, CH_2F, CHF_2, CF_3, and C_{1-6} alkyl, each R^a is independently selected from H, F, CH_2F, CHF_2, CF_3, and C_{1-6} alkyl, and two R^a substituents can optionally be joined forming a ring;

R^5 is H, halogen, CF_3, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, C_{1-4} alkoxyl, or C_{1-4} alkylthio, preferably H, F, CH_3, CF_3, CH_2CH_3, $CH{=}CH_2$, CH_2CF_3, or CF_2CF_3, more preferably H or F;

R^6 is H, C_{1-4} alkyl, C_{2-4} alkenyl, C_{3-6} cycloalkyl, preferably H;

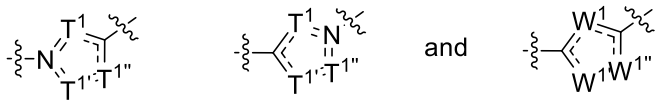
n is 1, 2, 3, or 4, preferably 3;

Q is either absent, $-N(R^7)-(C{=}O)-$, $-(C{=}O)-N(R^7)-$, $-CH_2N(R^7)-$, $-N(R^7)CH_2-$, $-N(R^7)SO_2-$, or $-SO_2N(R^7)-$, wherein R^7 is H, C_{1-4} alkyl, C_{1-4} alkenyl, or C_{1-4} alkynyl, preferably H, or Q is an amide bond bioisostere selected from the group consisting of



,

or

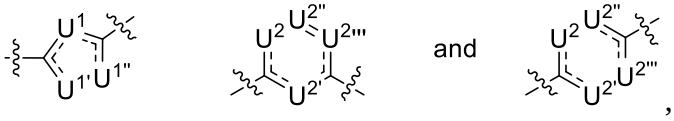


,

wherein R^b is selected from H and C_{1-5} alkyl, T1, T1' and T1'' are independently

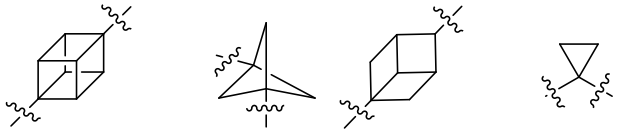
selected from CH and N, and W1, W1' and W1'' are independently selected from C, CH, S, N, NH, N(C_{1-5} alkyl) and O;

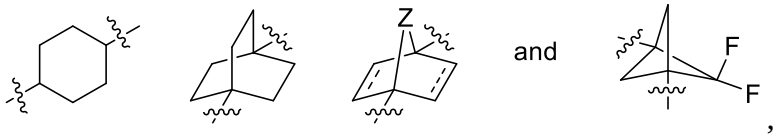
V is an aryl, heteroaryl, heterocycle, or cycloalkane that is optionally substituted with one or more R^4-groups and is independently selected from



,

wherein U1, U1', U1'', U2, U2', U2'' and U2''' are independently selected from C, CH, S, N, NH, N(C_{1-5} alkyl) and O, or V is selected from the group consisting of





,

wherein Z is O, S, NH or NR^c, and R^c is selected from H and C_{1-5} alkyl;

s is 0 or 1, preferably 1;

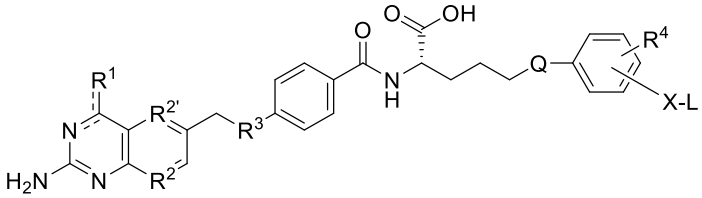
X is a connecting group selected from O, NH, S, C_{1-5} alkylene, C_{1-5} alkenylene and C_{1-5} alkynylene;

k is 1, 2, 3 or 4, preferably 1;

L is a linker moiety; and

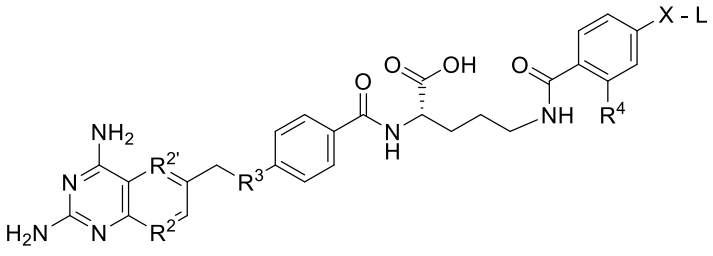
⎓ means that the indicated bond may be a single bond or a non-cumulated, optionally delocalized, double bond.

2. A linker-drug compound according to claim 1 of formula (Ia)



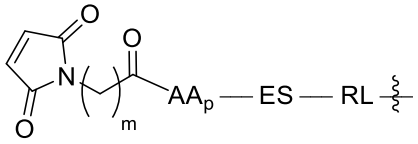
(**Ia**).

3. A linker-drug compound according to claim 1 or 2 of formula (Ic)

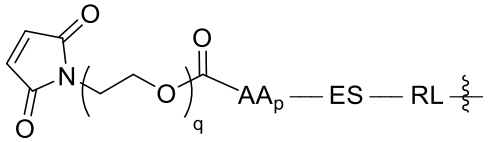


(**Ic**).

4. A linker-drug compound according to any one of claims 1-3, wherein L is



or



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wherein

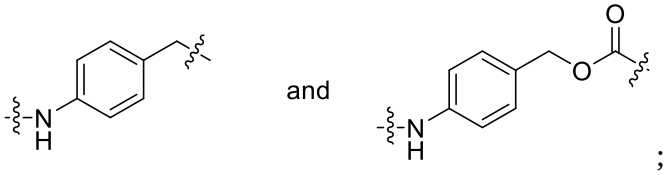
m is an integer ranging from 1 to 10, preferably 5;

AA is an amino acid, preferably a natural amino acid; and

p is 0, 1, 2, 3, or 4;

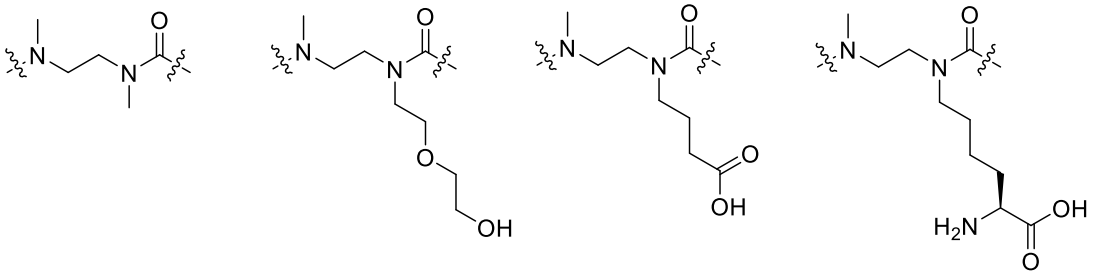
q is an integer ranging from 1 to 12, preferably 2;

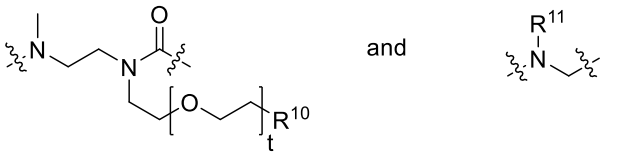
ES is either absent or an elongation spacer selected from



;

RL is either absent or an elimination spacer selected from

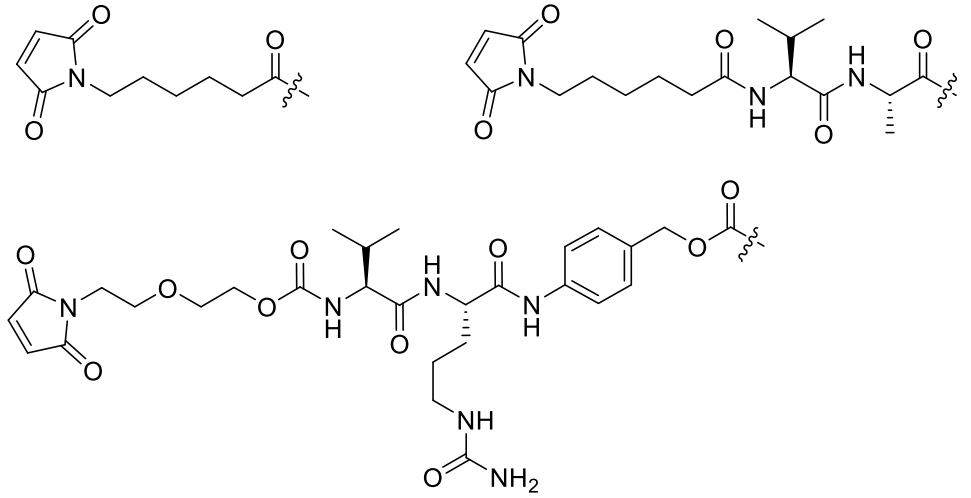


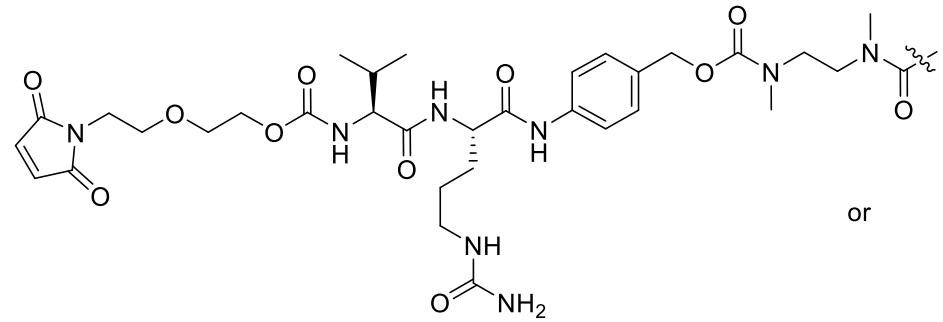


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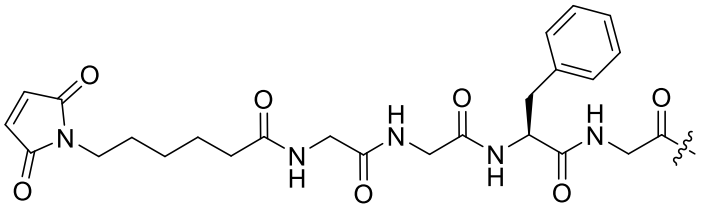
wherein t is an integer ranging from 1-10, R^{10} is optionally substituted C_{1-4} alkoxyl, and R^{11} is H, optionally substituted C_{1-6} alkyl, optionally substituted C_{6-14} aryl or optionally substituted C-linked C_{3-8} heteroaryl;

preferably wherein L is



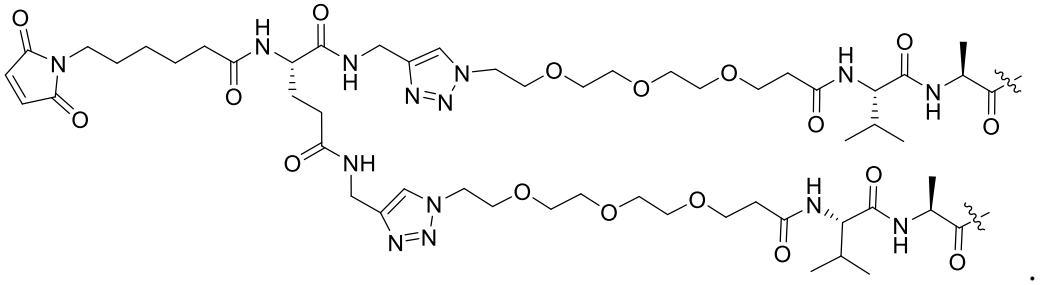


or



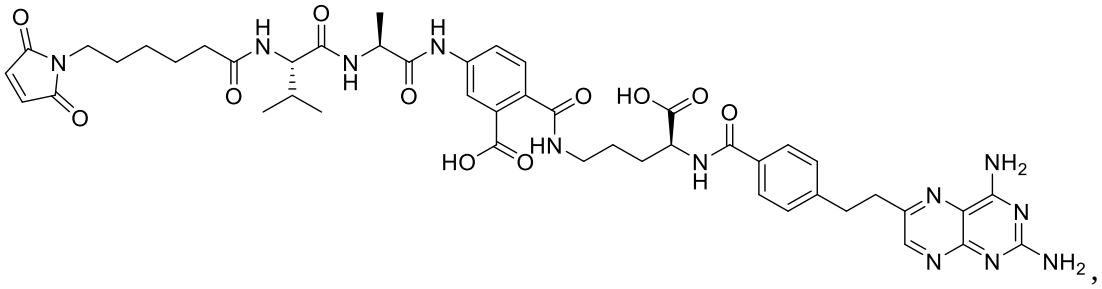
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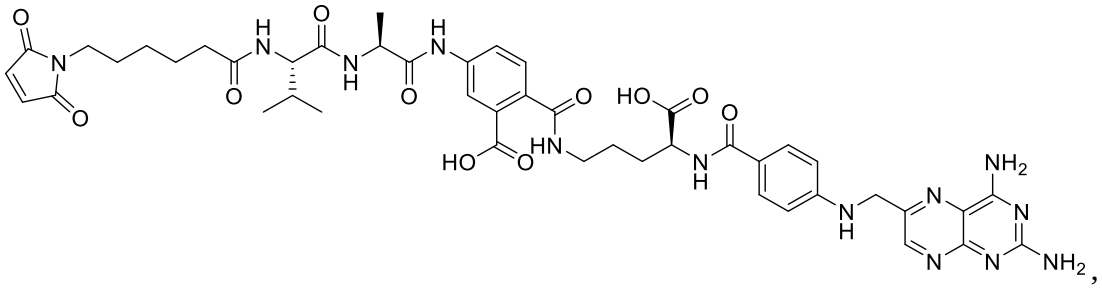
5. A linker-drug compound according to any one of claims 1-3, wherein L is

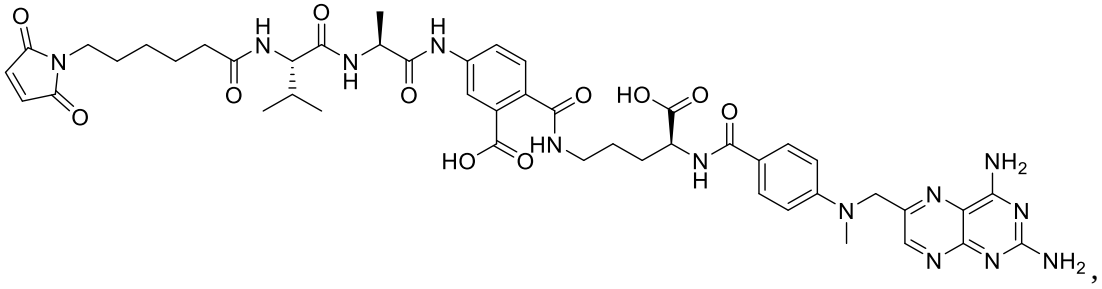


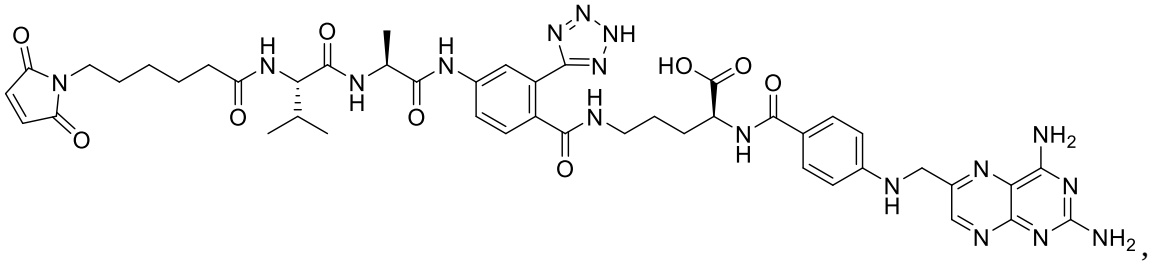
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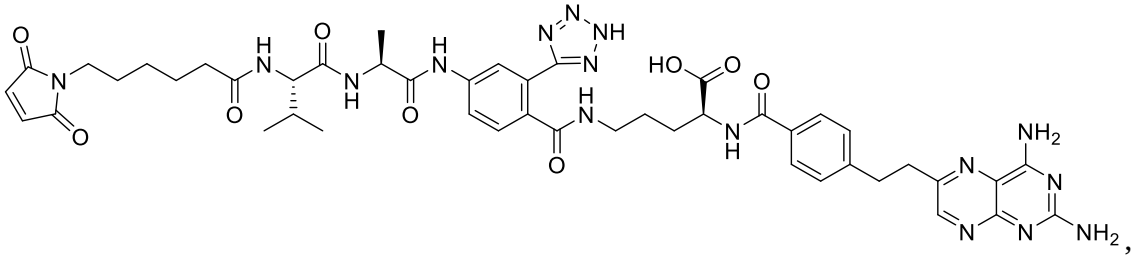
6. A linker-drug compound according to according any one of claims 1-4, wherein the linker-drug compound is of formula



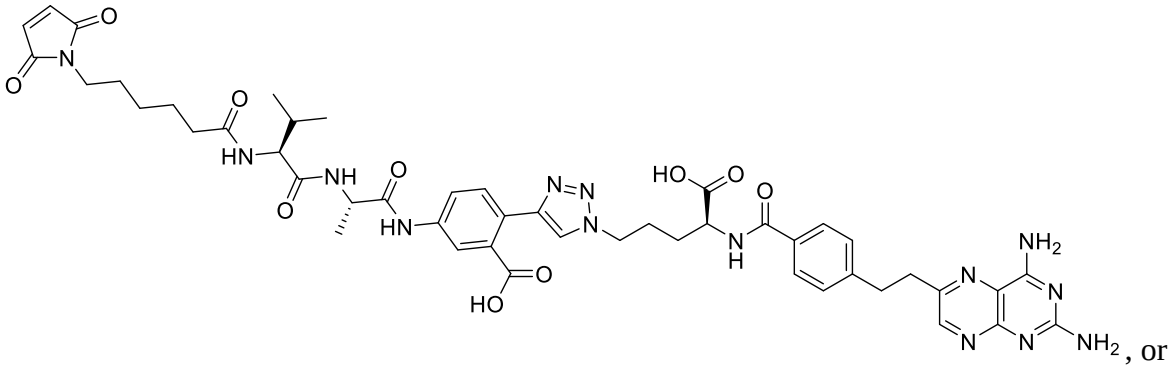


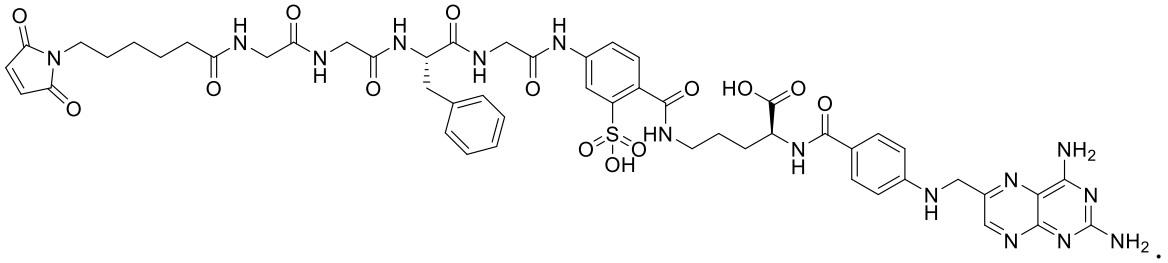




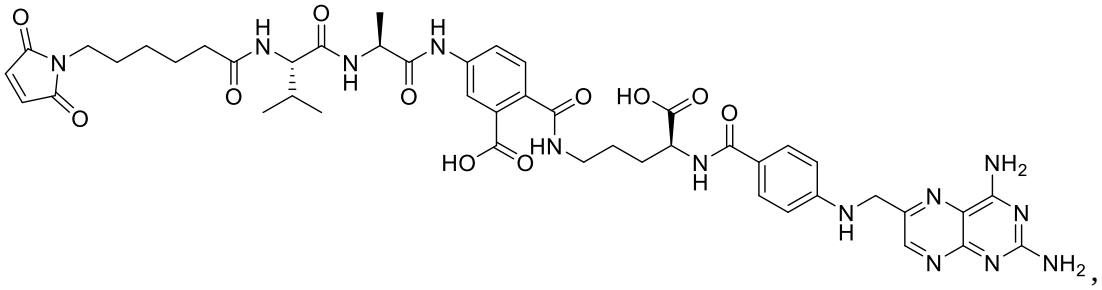


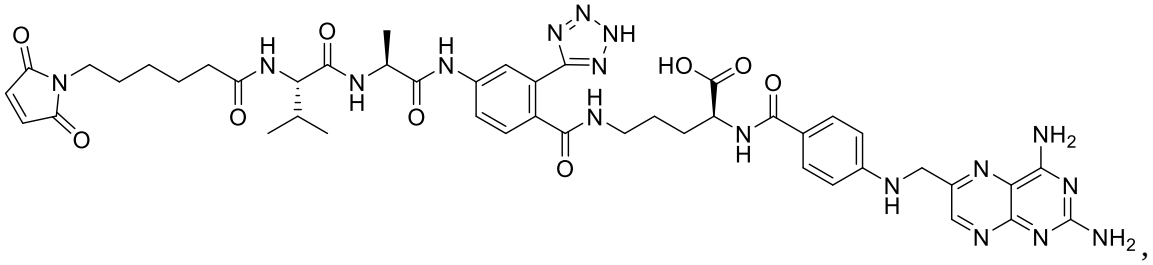
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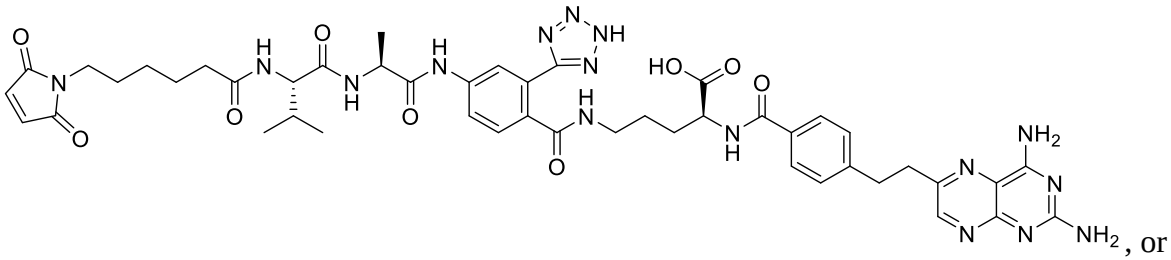

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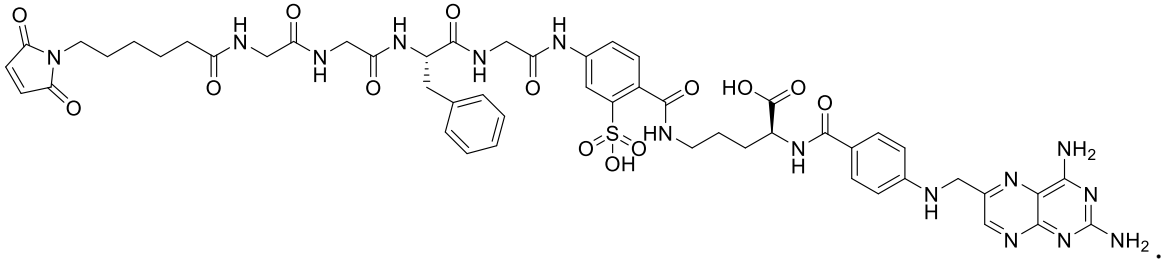


7. A linker-drug compound according to any one of claims 1-4, wherein the linker-drug compound is of formula









8. An antibody-drug conjugate of formula (III),

Ab-$(L\text{-}D)_y$ (**III**),

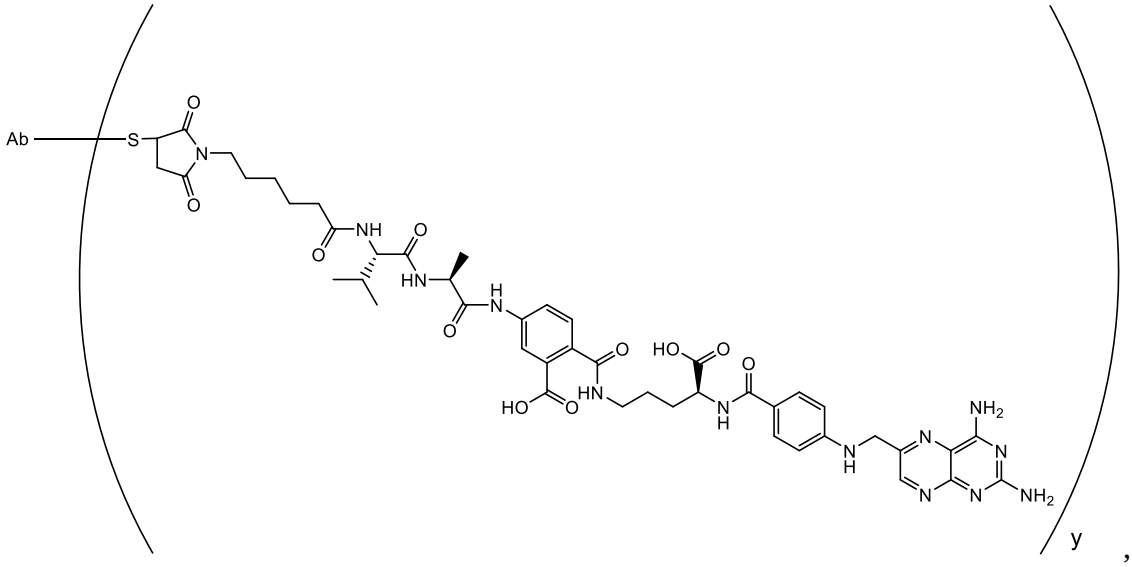
wherein Ab is an antibody or an antigen-binding fragment thereof;

L-D is a linker-drug compound according to any one of claims 1-7;

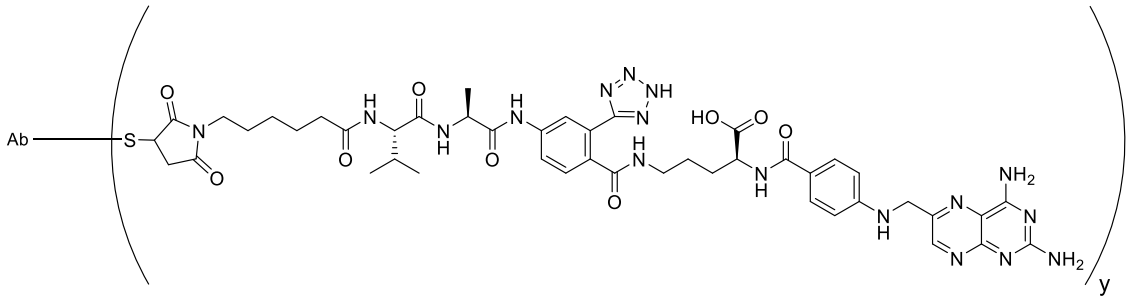
y represents an average drug-to-antibody ratio of from 1 to 16;

and wherein the linker-drug compound is conjugated to the antibody or antigen-binding fragment thereof, preferably through a cysteine residue of the antibody or the antigen-binding fragment.

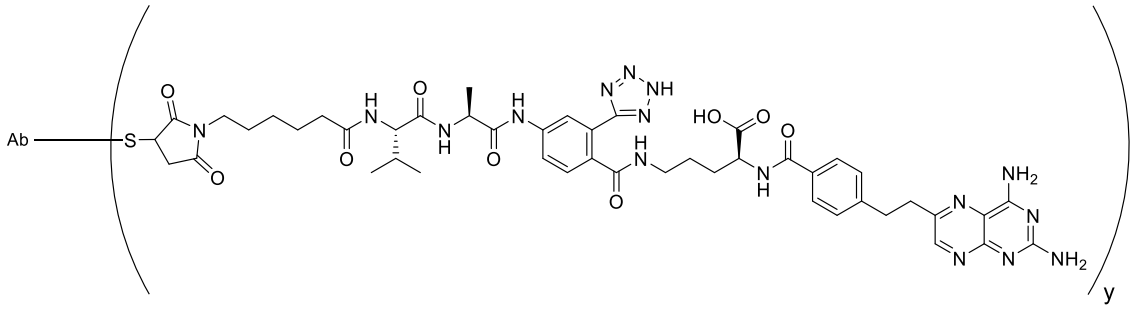
9. An antibody-drug conjugate according to claim 8, wherein the antibody-drug conjugate is of formula



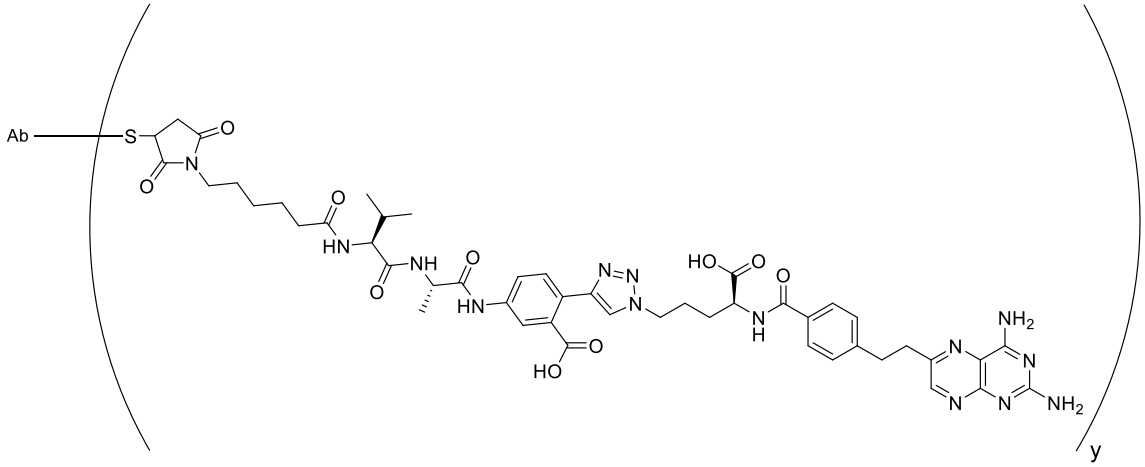
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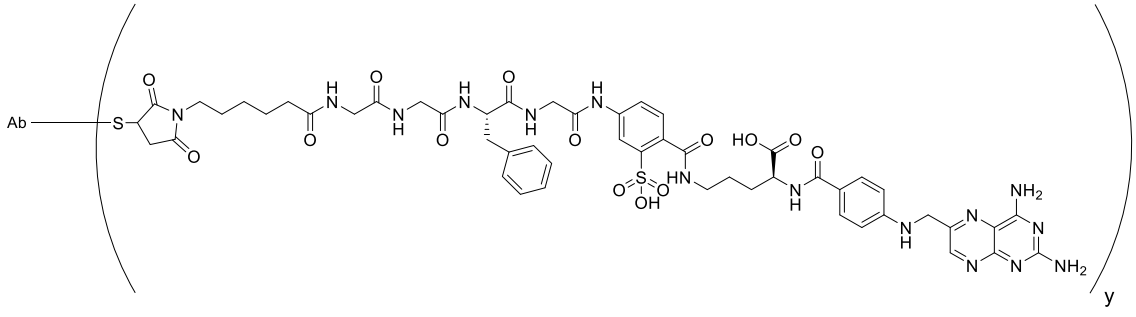


,



,

or



,

wherein

Ab is an antibody or antigen-binding fragment thereof; and

y represents an average drug-to-antibody ratio of from 1 to 16, preferably of from 1 to 10.

10. An antibody-drug conjugate according to claim 8 or 9, wherein the antibody or the antigen-binding fragment binds to an antigen target selected from the group consisting of annexin Al, B7H3, B7H4, BCMA, CA6, CA9, CA15-3, CA19-9, CA27-29, CA125, CA242, CAIX, CCR2, CCR5, CD2, CD19, CD20, CD22, CD24, CD30, CD33, CD37, CD38, CD40, CD44, CD47, CD56, CD70, CD71, CD73, CD74, CD79, CD115, CD123, CD138, CD203c, CD303, CD333, CDCP1, CEA, CEACAM, Claudin 4, Claudin 7, CLCA-1, CLL 1, c-MET, Cripto, DLL3, EGFL, EGFR, EPCAM, EphA2, EPhB3, ETBR, FAP, FcRL5, FGFR3, FOLR1, FRbeta, GCC, GD2, GITR, GLOBO H, GPA33, GPC3, GPNMB, HER2, p95HER2, HER3, HMW-MAA, integrin α, IGF1R, TM4SF1, Lewis A like carbohydrate, Lewis X, Lewis Y, LGR5, LIV1, mesothelin, MN, MUC1, MUC16, NaPi2b, Nectin-4, Notch3, PD-1, PD-L1, PSMA, PTK7, SLC44A4, STEAP-1, 5T4, TF, TF-Ag, Tag72, TNFalpha, TNFR, TROP2, uPAR, VEGFR and VLA.

11. A pharmaceutical composition comprising the linker-drug compound according to any one of claims 1-7 or the antibody-drug conjugate according to any one of claims 8-10 and one or more pharmaceutically acceptable excipients.

12. A linker-drug compound according to any one of claims 1-7, an antibody-drug conjugate according to any one of claims 8-10, or a pharmaceutical composition according to claim 11 for use as a medicament.

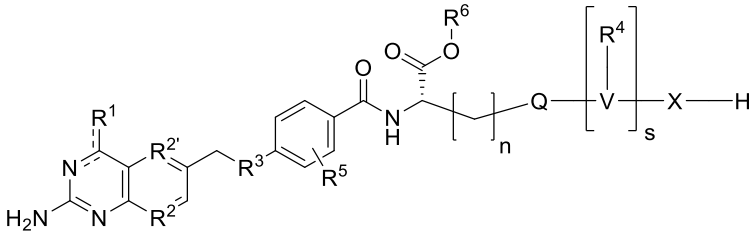
13. Use of a linker-drug compound according to any one of claims 1-7, an antibody-drug conjugate according to any one of claims 8-10, or a pharmaceutical composition according to claim 11, in the manufacture of a medicament for treating a solid tumor or hematological malignancy.

14. Use of a linker-drug compound according to any one of claims 1-7, an antibody-drug conjugate according to any one of claims 8-10, or a pharmaceutical composition according to claim 11, in the manufacture of a medicament for treating an autoimmune disease, preferably rheumatoid arthritis.

15. Use of a linker-drug compound according to any one of claims 1-7, an antibody-drug conjugate according to any one of claims 8-10, or a pharmaceutical composition according to claim 11, in the manufacture of a medicament for treating a bacterial, viral, parasitic or other infection.

16. A linker-drug compound according to any one of claims 1-7, an antibody-drug conjugate according to any one of claims 8-10, or a pharmaceutical composition according to claim 11 for use in combination therapy with one or more other therapeutic agents.

17. Use of a compound of formula



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wherein

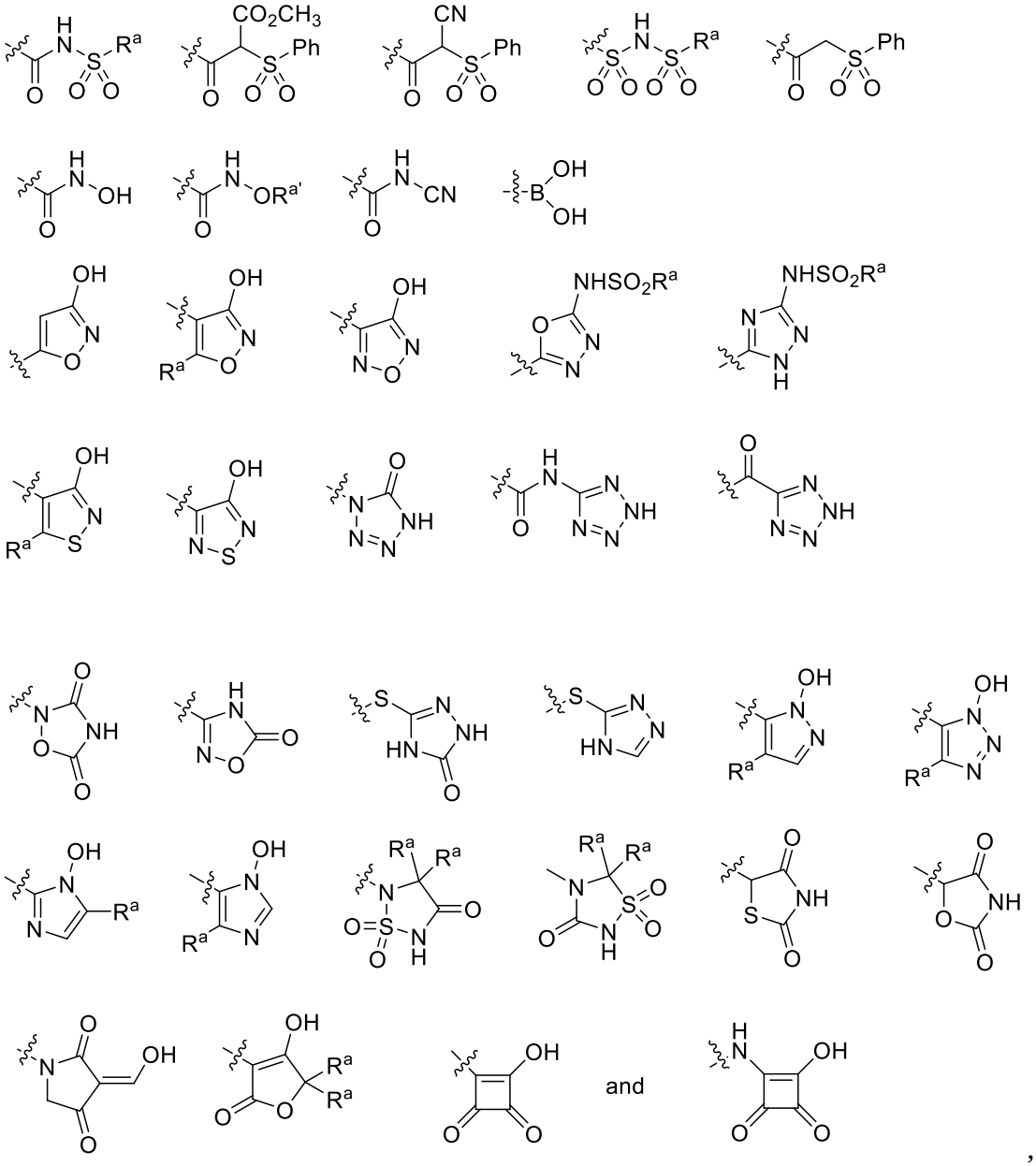
R^1 is O, NH_2 or OH;

R^2 and $R^{2'}$ are independently N, CH or CMe;

R^3 is NH, N(C_{1-5} alkyl), CH_2, CH(C_{1-5} alkyl), CH(C_{2-4} alkenyl), CH(C_{2-4} alkynyl), or CH(C_{1-4} alkoxyl);

R^4 is H, halogen, -COOH, OH, NH_2, -$CONH_2$, -CONHR, -$CONHR_2$, C_{1-4} alkyl, C_{1-4}

alkoxyl, benzyloxy, tetrazole, -SO_3H, -OSO_3H, -PO_3H_2, -OPO_3H_2, -CN, or azido, wherein R is selected from H and C_{1-5} alkyl, or R^4 is a carboxylic acid bioisostere selected from the group consisting of



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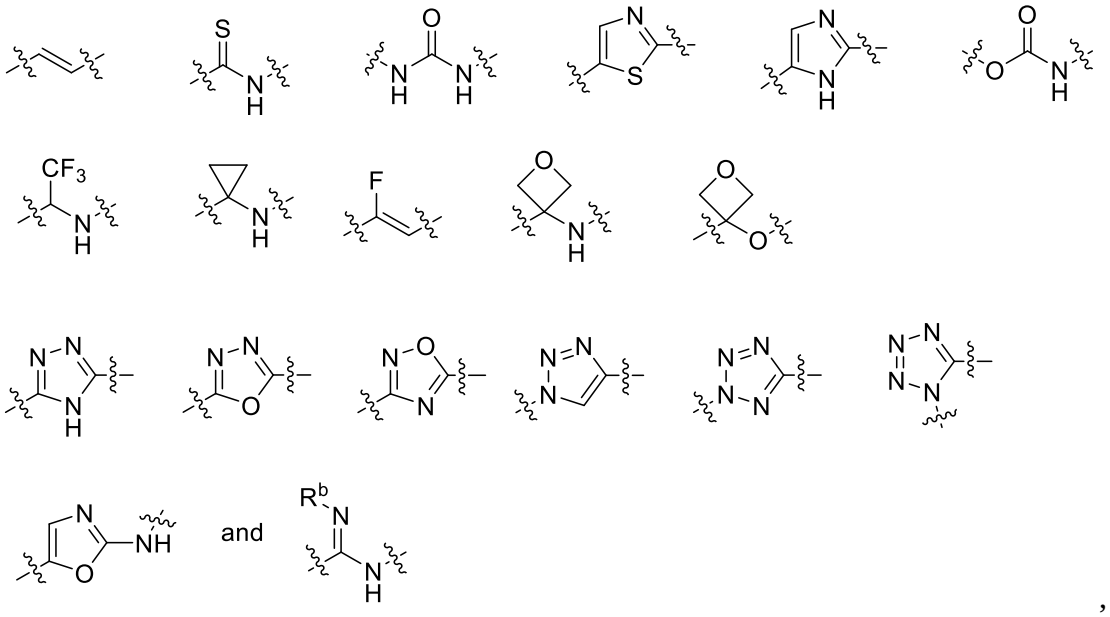
wherein $R^{a'}$ is selected from H, CH_2F, CHF_2, CF_3, and C_{1-6} alkyl, each R^a is independently selected from H, F, CH_2F, CHF_2, CF_3, and C_{1-6} alkyl, and two R^a substituents can optionally be joined forming a ring;

R^5 is H, halogen, CF_3, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, C_{1-4} alkoxyl, or C_{1-4} alkylthio, preferably H, F, CH_3, CF_3, CH_2CH_3, $CH{=}CH_2$, CH_2CF_3, or CF_2CF_3, more preferably H or F;

R^6 is H, C_{1-4} alkyl, C_{2-4} alkenyl, C_{3-6} cycloalkyl, preferably H;

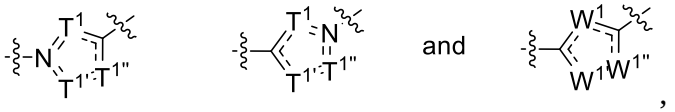
n is 1, 2, 3, or 4, preferably 3;

Q is either absent, -N(R^7)-(C=O)-, -(C=O)-N(R^7)-, -CH_2N(R^7)-, -N(R^7)CH_2-, -N(R^7)SO_2-, or -SO_2N(R^7)-, wherein R^7 is H, C_{1-4} alkyl, C_{1-4} alkenyl, or C_{1-4} alkynyl, preferably H, or Q is an amide bond bioisostere selected from the group consisting of



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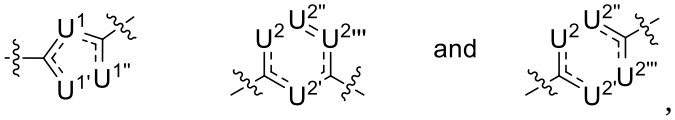
or



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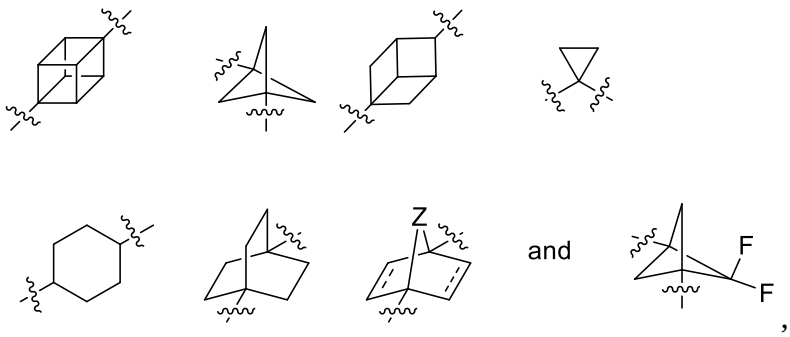
wherein R^b is selected from H and C_{1-5} alkyl, T1, T1' and T1'' are independently selected from CH and N, and W1, W1' and W1'' are independently selected from C, CH, S, N, NH, N(C_{1-5} alkyl) and O;

V is an aryl, heteroaryl, heterocycle, or cycloalkane that is optionally substituted with one or more R^4-groups and is independently selected from



,

wherein U1, U1', U1'', U2, U2', U2'' and U2''' are independently selected from C, CH, S, N, NH, N(C_{1-5} alkyl) and O, or V is selected from the group consisting of



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wherein Z is O, S, NH or NR^c, and R^c is selected from H and C_{1-5} alkyl;

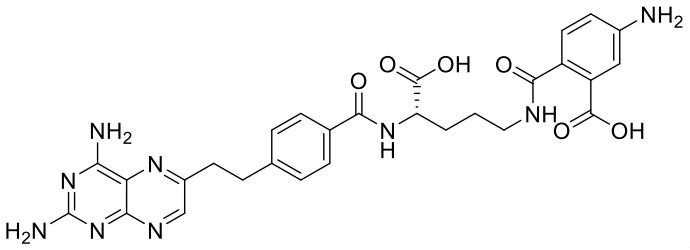
s is 0 or 1, preferably 1;

X is selected from O, NH, S, C_{1-5} alkylene, C_{1-5} alkenylene and C_{1-5} alkynylene; and

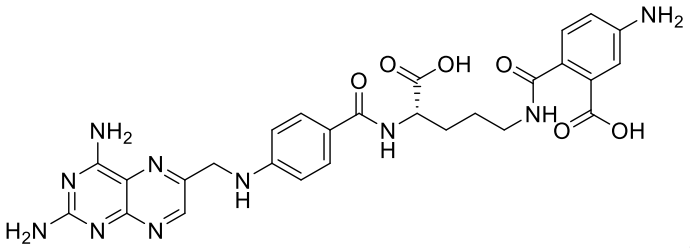
⎓ means that the indicated bond may be a single bond or a non-cumulated, optionally delocalized, double bond,

in a process for making the linker-drug compound according to any one of claims 1-7 or the antibody-drug conjugate according to any one of claims 8-10.

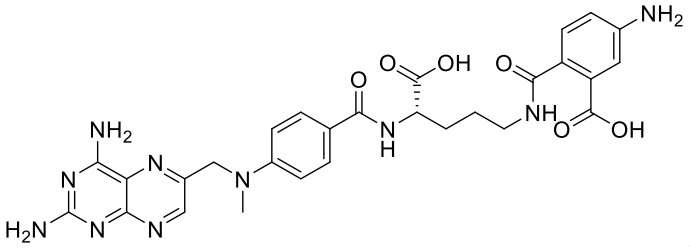
18. Use according to claim 17, wherein the compound is



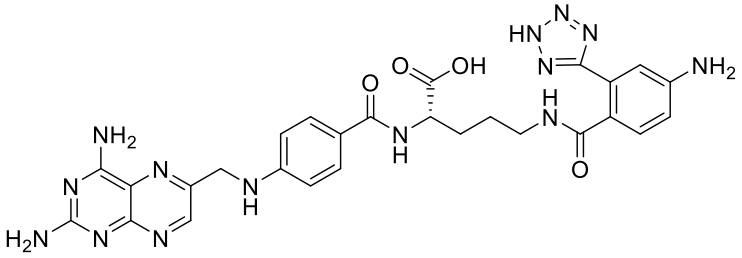
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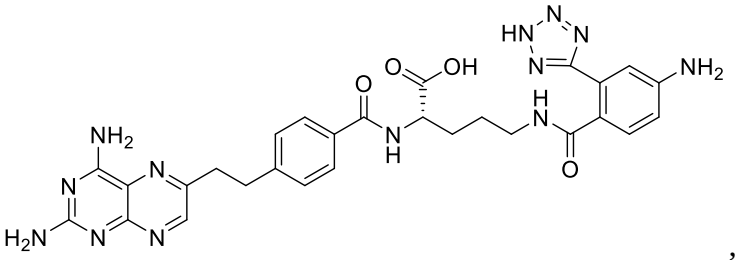
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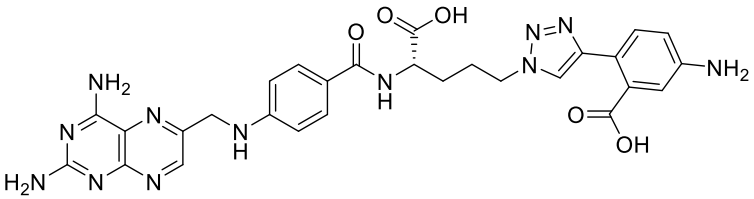


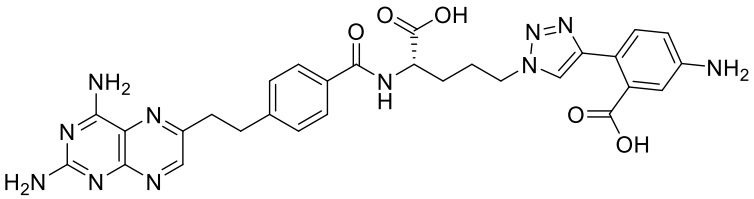
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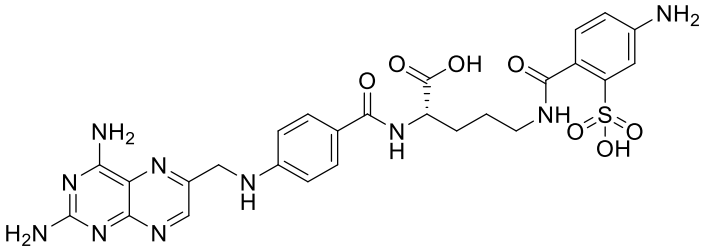


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