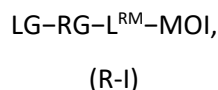


CLAIMS

We claim:

1. A compound having the structure of formula R-I:

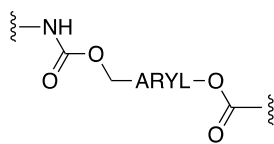


or a salt thereof, wherein:

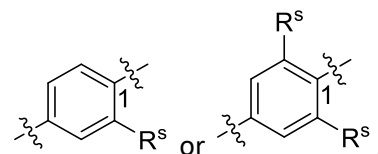
LG is a group comprising a target binding moiety that binds to an antibody agent, wherein LG is $\text{R}^{\text{LG}}\text{-L}^{\text{LG}}$;

L^{LG} is a bivalent linker that is a bond or comprises one or more $\text{-}[(\text{CH}_2)_n\text{-O}]_m\text{-}$, wherein each n is independently 1-20, and m is 1-100;

RG is a reactive group of formula



, wherein ARYL has the structure of



, wherein R^{S} is independently chosen at each occurrence from halogen, preferably fluorine, -NO_2 , -CN , C_{1-10} trifluoroalkyl, preferably -CF_3 , C_{1-10} alkyl, C_{1-10} alkyl, -OH , -NH_2 , and $\text{-CO}_2\text{H}$;

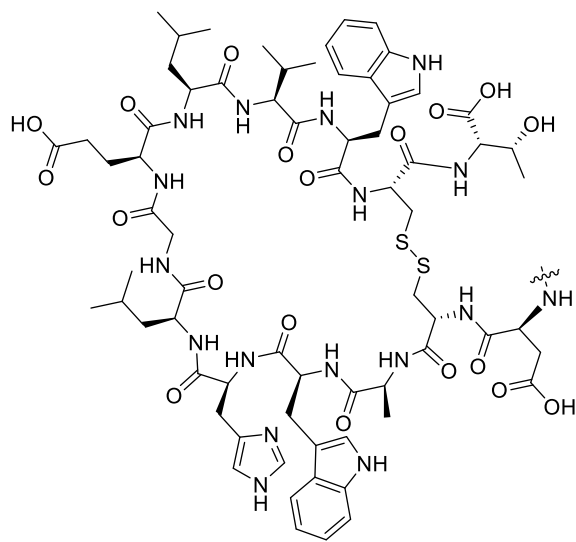
L^{RM} is a bivalent linker comprising one or more $\text{-}[(\text{CH}_2)_n\text{-O}]_m\text{-}$, wherein each n is independently 1-20, and m is 1-100; and

MOI is a moiety of interest,

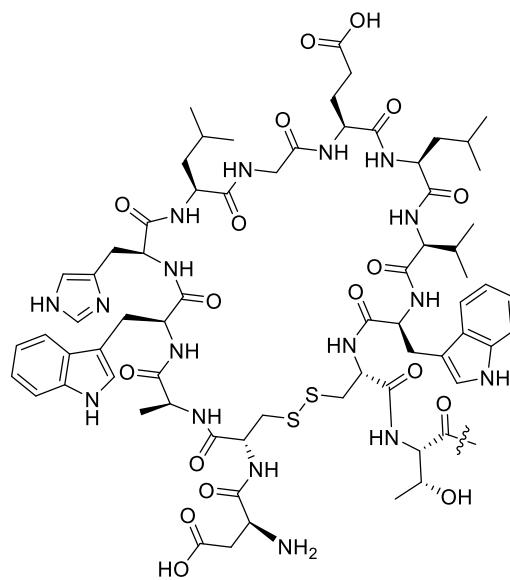
wherein:

R^{LG} comprises the amino acid sequence DCAWXLGELVWCT (SEQ ID NO:2), wherein the two C residues optionally form a disulfide bond and X is an amino acid residue; or

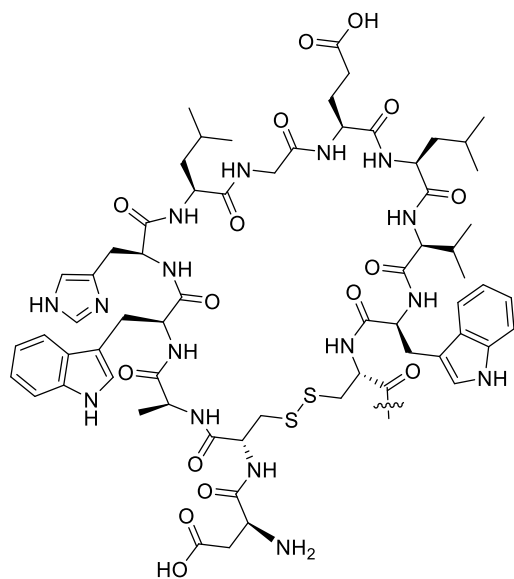
R^{LG} is a target binding moiety selected from A-12, A-16 to A-19, and A-46 to A-50:



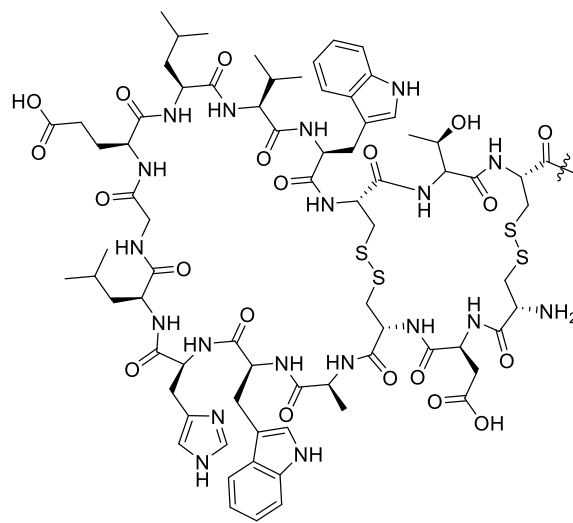
A-12



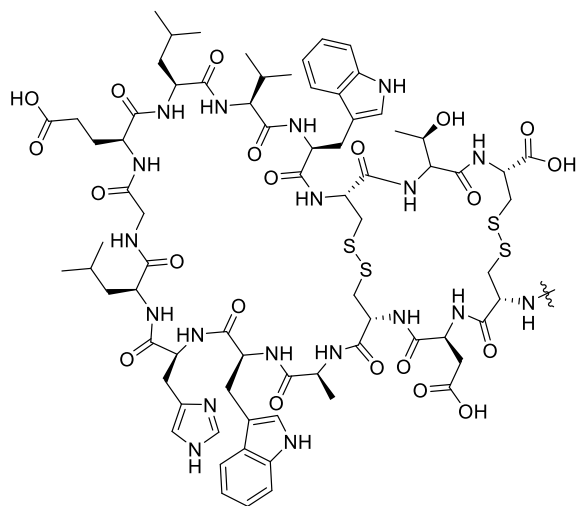
A-16



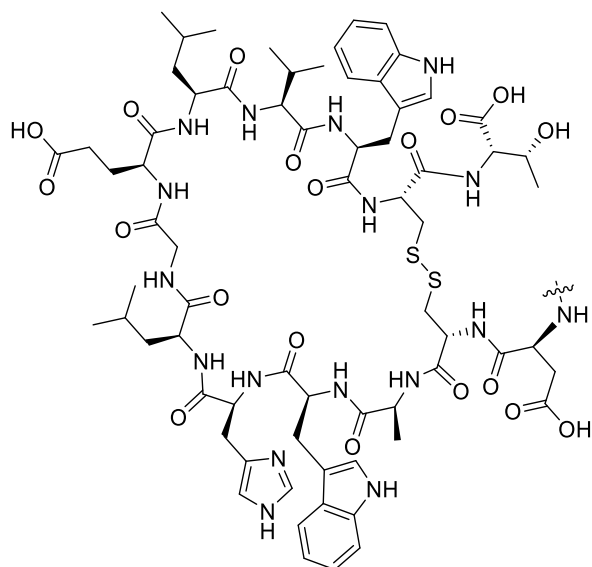
A-17



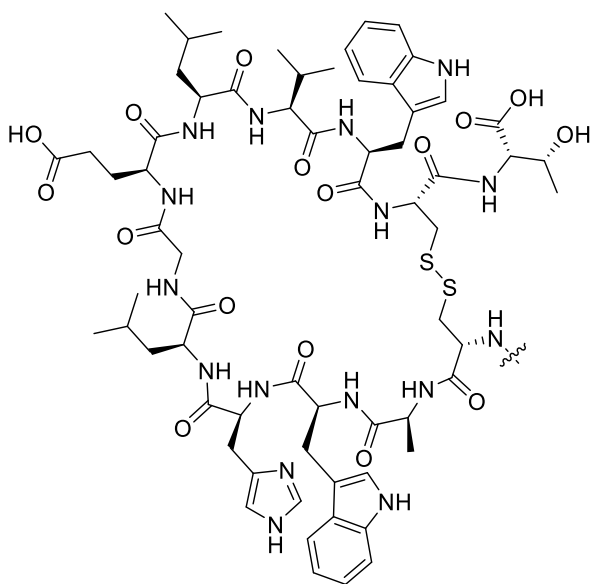
A-18



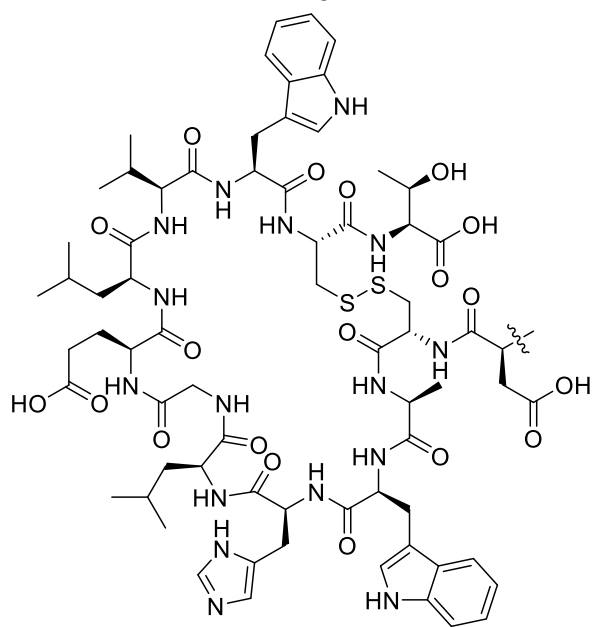
A-19



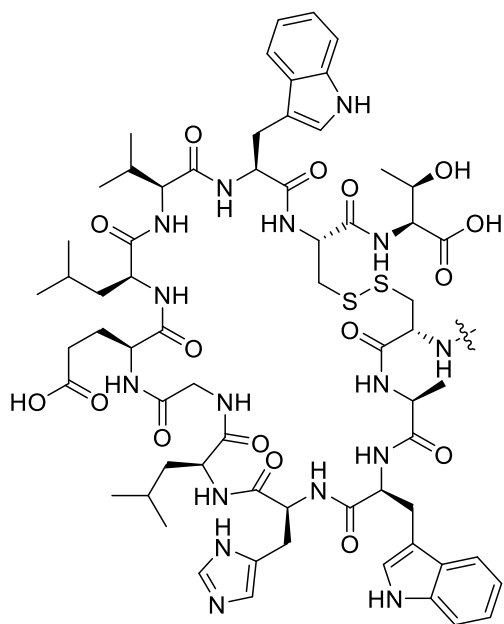
A-46



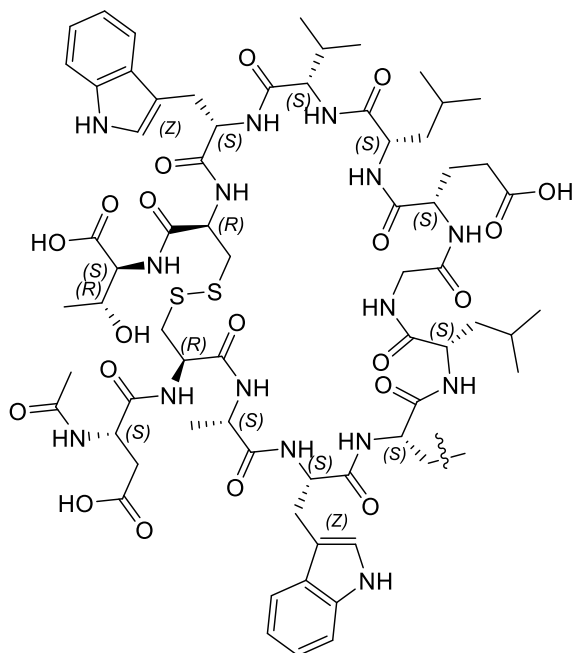
A-47



A-48



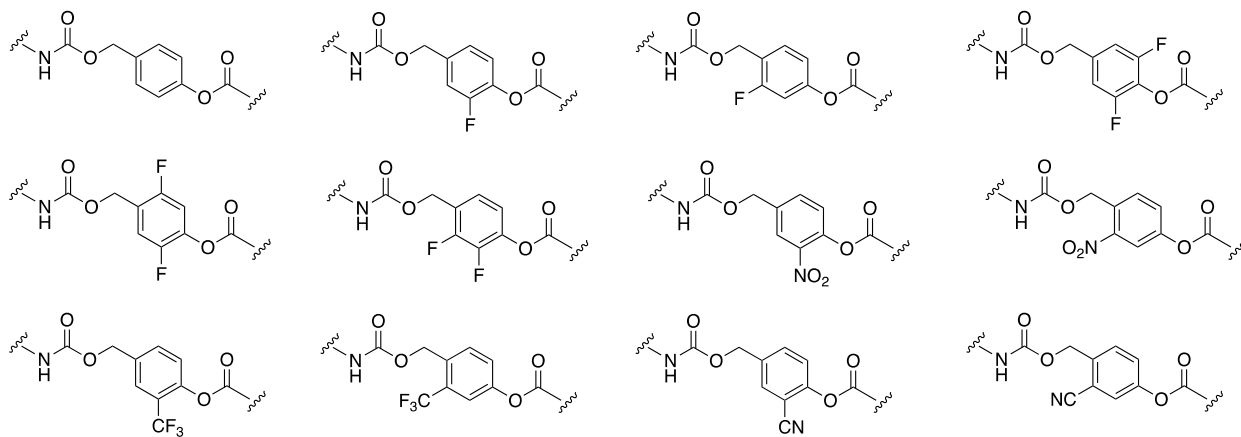
A-49



A-50

2. The compound or the salt thereof of Claim 1, wherein R^5 is independently chosen at each occurrence from halogen, $-\text{NO}_2$, $-\text{CN}$, and $-\text{CF}_3$.

3. The compound or the salt thereof of Claim 2 or 3, wherein the reactive group has one of the following formulae:



4. The compound or the salt thereof of Claim 1, wherein the antibody agent is immunoglobulin G (IgG).

5. The compound or the salt thereof of Claim 1, wherein R^{LG} comprises DCAWXLGELVWCT (SEQ ID NO:2), wherein the two cysteine residues optionally form a disulfide bond, and X is an amino acid residue.

6. The compound or the salt thereof of Claim 1, wherein at least one of the following conditions is met:

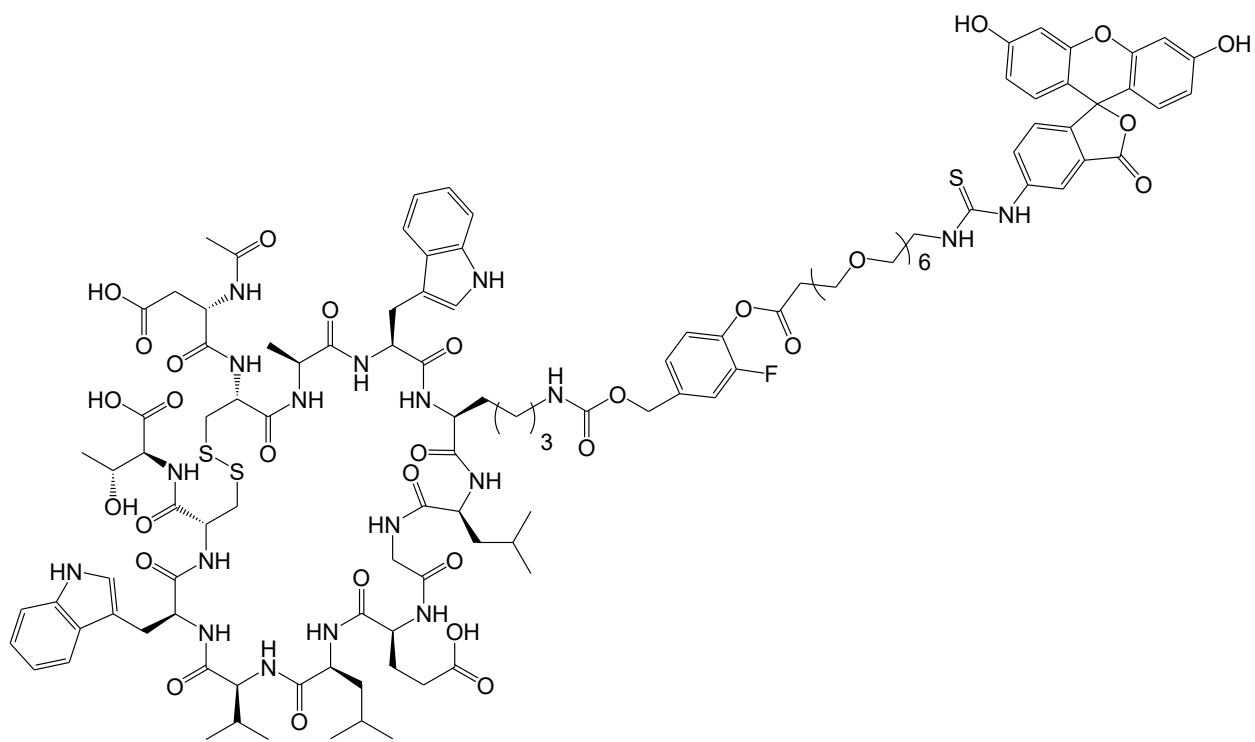
- (a) the moiety of interest is or comprises a therapeutic agent;
- (b) the moiety of interest is or comprises a moiety that can bind to a protein, nucleic acid or a cell; and/or
- (c) the moiety of interest is or comprises a reactive moiety suitable for a bio-orthogonal reaction.

7. The compound or the salt thereof of Claim 1, wherein R^{LG} is a target binding moiety having the structure of formula A-12, A-16 to A-19, and A-46 to A-50.

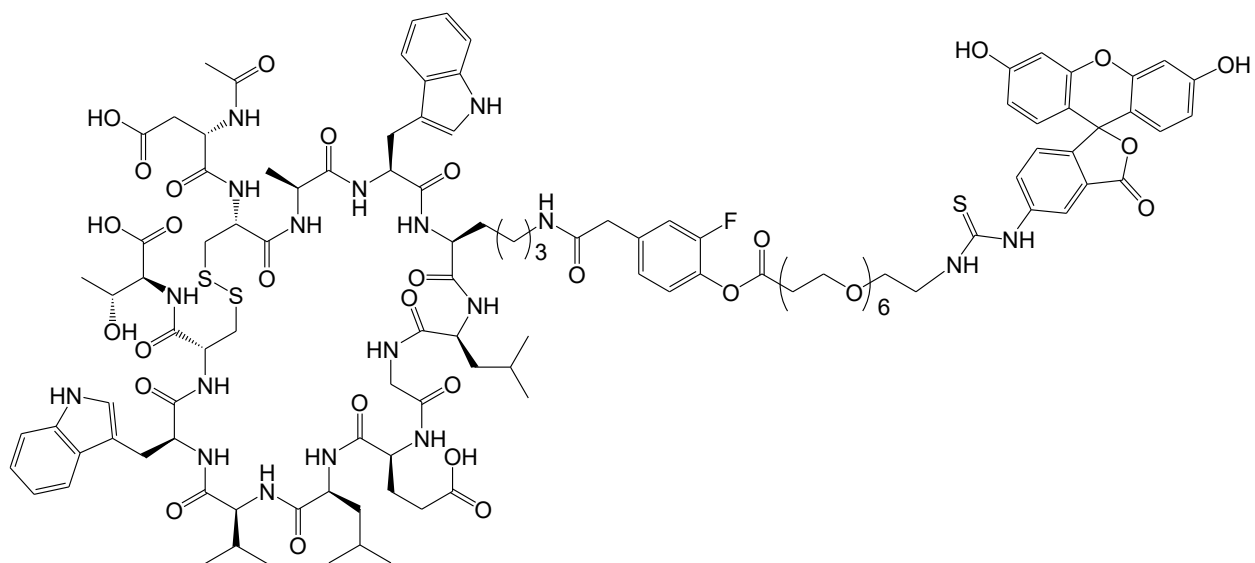
8. The compound or the salt thereof of Claim 1, wherein MOI is or comprises a therapeutic agent moiety and/or MOI is or comprises an antibody agent.

9. The compound or the salt thereof of Claim 1, wherein in formula (R-I):
the antibody agent comprises an IgG heavy chain comprising K246 or K248, and
the target binding moiety is configured to bind the antibody agent so as to bring the reactive group in proximity with K246 or K248 of the IgG heavy chain to enable a reaction between K246 or K248 and the reactive group that results in attachment of a moiety comprising L^{RM}-MOI to K246 or K248 and expulsion of the group containing a target binding moiety from the compound.

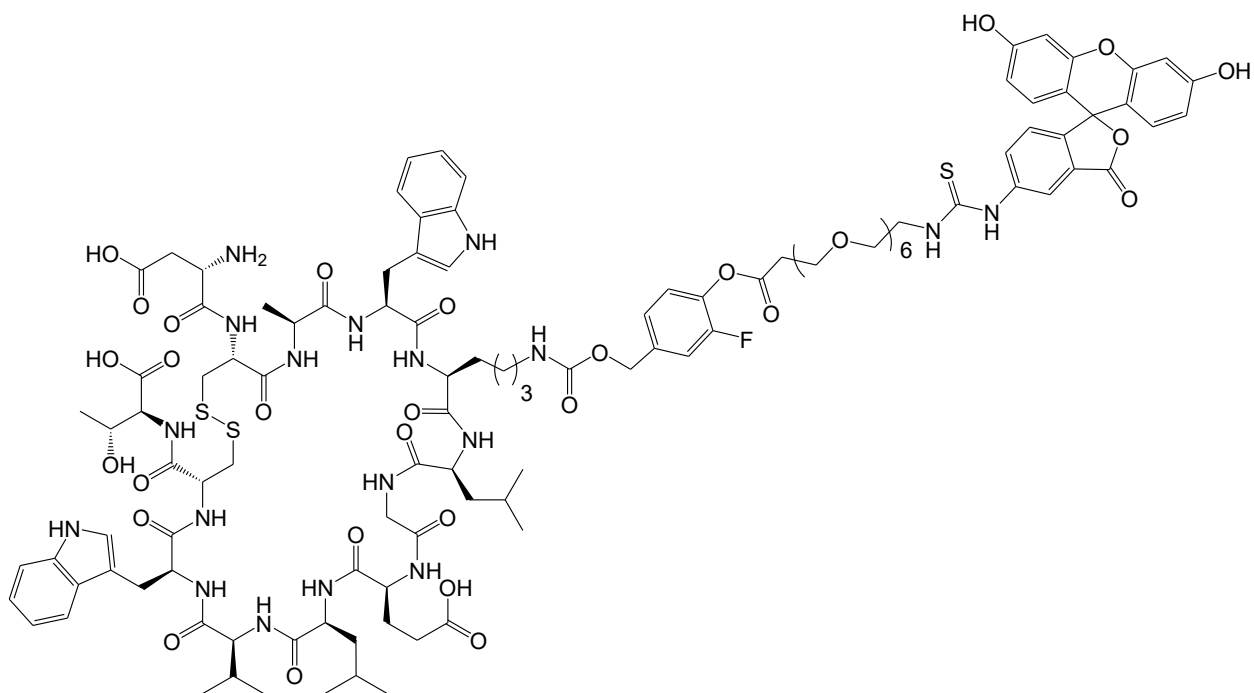
10. The compound of Claim 1, wherein the compound has the chemical structure:



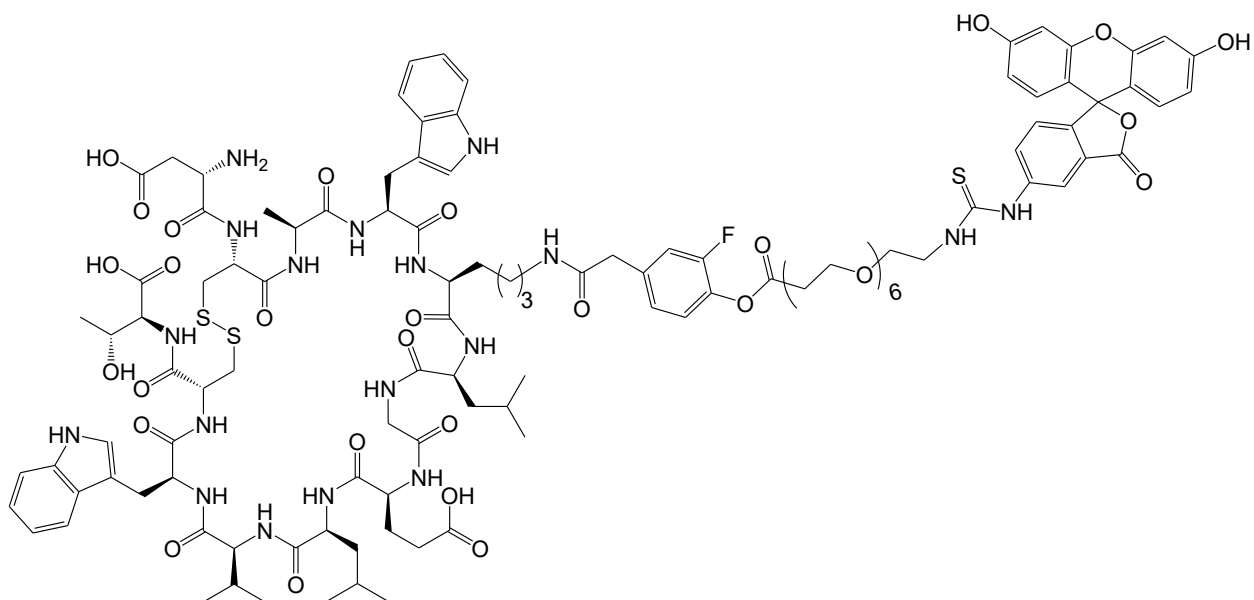
(compound 1292),



(compound 1293),

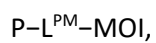


(compound 1294), or



(compound 1295).

11. A method of preparing an agent having the structure of P-I:



(P-I)

or a salt thereof, wherein:

P is an antibody agent;

L^{PM} is a bivalent linker comprising one or more $-[(CH_2)_n-O]_m-$, wherein each n is independently 1-20, and m is 1-100; and

MOI is a moiety of interest.

the comprising steps of:

- 1) contacting an antibody agent with a reaction partner, wherein the reaction partner is a compound of any one of claims 1-10; and
- 2) forming an agent or a salt thereof having the structure of formula P-I.

12. A method of preparing an agent having the structure of P-II:



(P-II)

or salt thereof, wherein:

P-N is an antibody agent comprising a lysine residue;

L^{PM} is a bivalent linker that is bound to the lysine residue, wherein the bivalent linker comprises one or more $-[(CH_2)_n-O]_m-$, wherein each n is independently 1-20, and m is 1-100; and

MOI is a moiety of interest,

the method comprising:

- contacting P-N with a reaction partner, wherein the reaction partner is a compound of any one of claims 1-10; and
- forming an agent or a salt thereof having the structure of formula P-II.

13. The method of claim 11 or 12, wherein a target agent is or comprises an antibody agent.

14. The method of claim 13, wherein a moiety of interest is selectively attached to the antibody agent at K246 or K248 of an IgG1 heavy chain or a corresponding location.

15. The method of claim 13, wherein a moiety of interest is selectively attached to the antibody agent at K251 or K253 of an IgG2 heavy chain or a corresponding location.

16. The method of claim 13, wherein a moiety of interest is selectively attached to the antibody agent at K239 or K241 of an IgG4 heavy chain or a corresponding location.

17. The method of claim 11 or 12, wherein the contacting and forming steps are performed in one chemical reaction.

18. A composition comprising one or more compounds of any one of Claims 1-10.

19. A compound of claim 1 of the formula

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