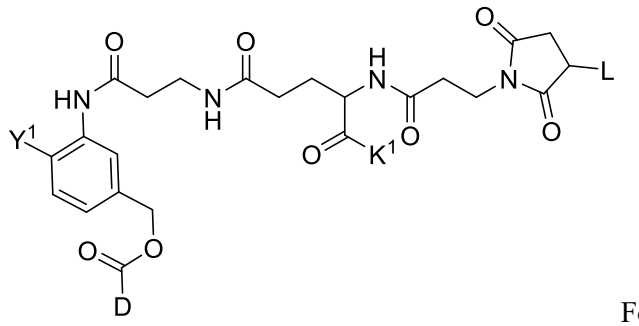
## CLAIMS

WHAT IS CLAIMED IS:

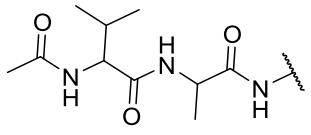
1. A conjugate of the Formula (A-1):



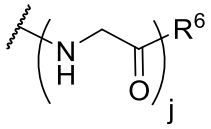
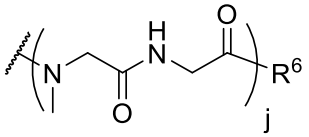
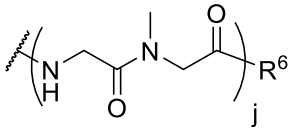
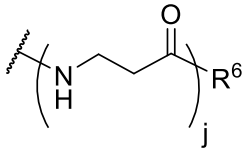
Formula (A-1)

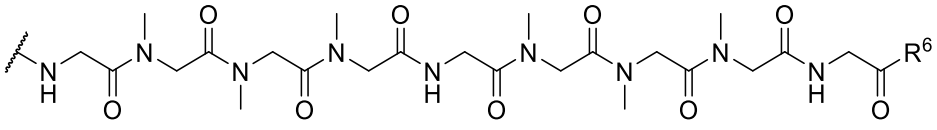
or a pharmaceutically acceptable salt thereof, wherein;

D is selected from a Drug unit;

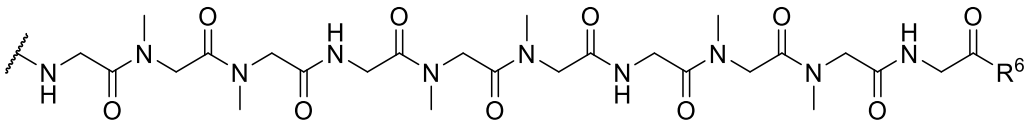
$Y^1$ is  ;

L is a Targeting Unit, wherein the Targeting unit is selected from an antibody or an antigen-binding portion thereof;

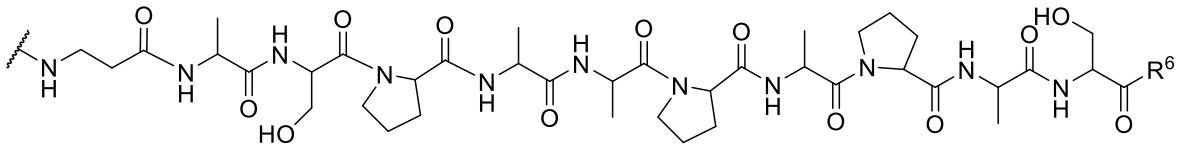
$K^1$ is selected from  (SEQ ID NO: 66),  (SEQ ID NO: 67),  (SEQ ID NO: 68),  (SEQ ID NO: 69),



(SEQ ID NO: 72),

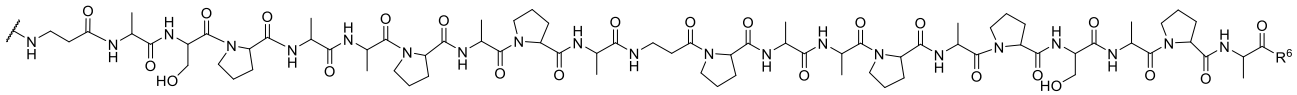


, (SEQ ID NO:

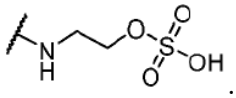


73),

(SEQ ID NO: 70), and



(SEQ ID NO: 71), each j is selected from 1 to 30, and each $R^6$ is selected from -OH, $-NH_2$, and



.

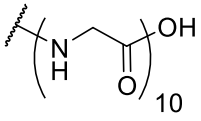
2. The conjugate or salt of claim 1, wherein D is selected from a cytotoxic agent and an immune modulatory agent.

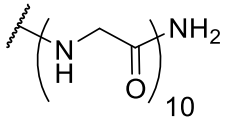
3. The conjugate or salt of claim 1 or 2, wherein D is selected from a cytotoxic agent.

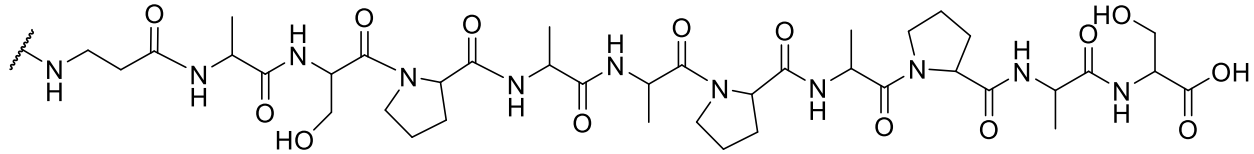
4. The conjugate or salt of any one of claims 1-3, wherein D is selected from tubulin disrupting agents, topoisomerase inhibitors, DNA minor groove binders, and DNA alkylating agents.

5. The conjugate or salt of any one of claims 1-4, wherein D is selected from MMAE, MMAF and exatecan.

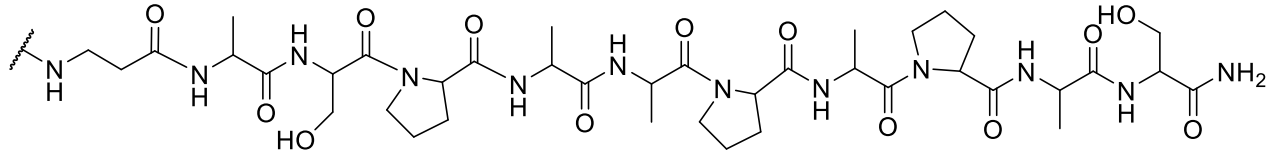
6. The conjugate or salt of any one of claims 1-5, wherein D is exatecan.

7. The conjugate or salt of any one of claims 1-6, wherein $K^1$ is selected from 

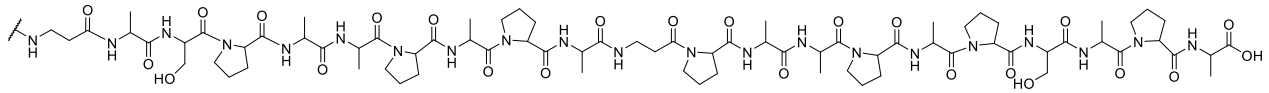
(SEQ ID NO: 75),  (SEQ ID NO: 75),



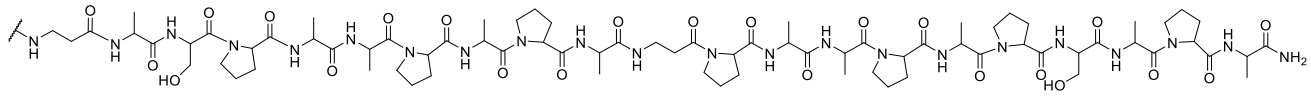
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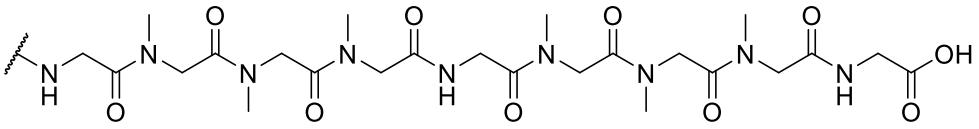
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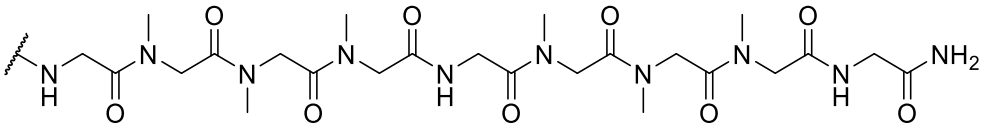
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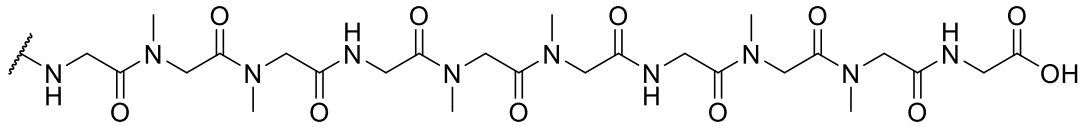
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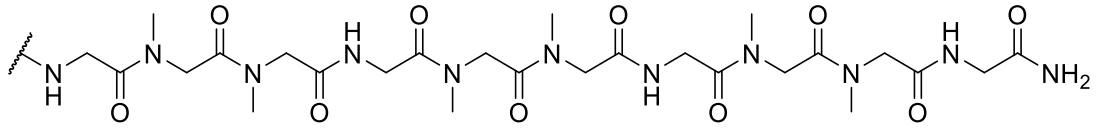
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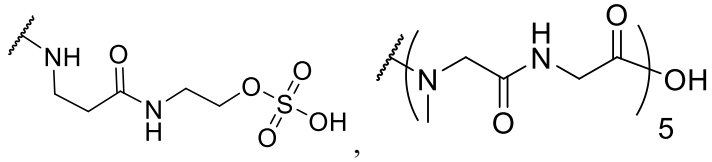
(SEQ ID NO: 72),



SEQ ID NO: 73),

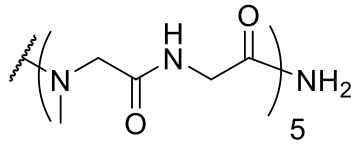


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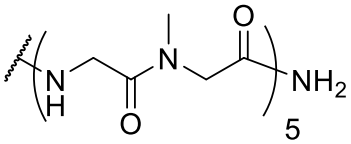




(SEQ ID NO: 76),

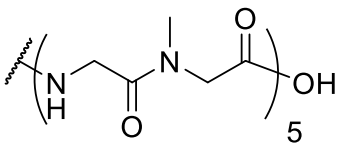


(SEQ ID NO: 76),



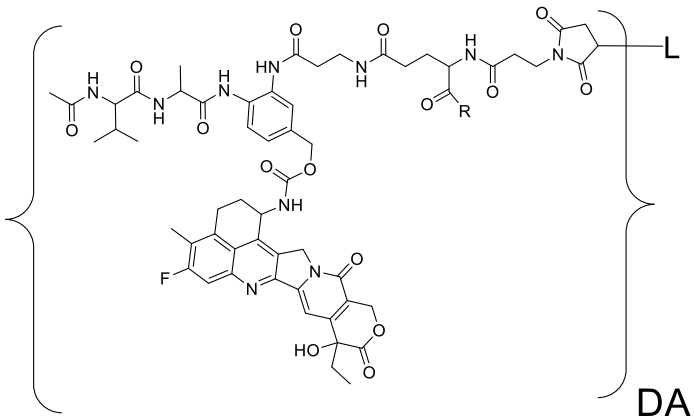
(SEQ ID NO: 77)

and

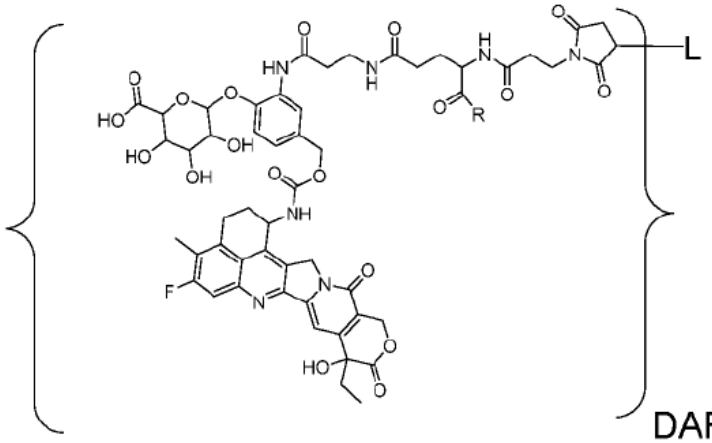


(SEQ ID NO: 77).

8. The conjugate or salt of any one of claims 1-7, wherein the conjugate is selected from

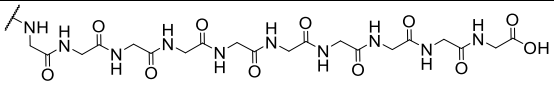
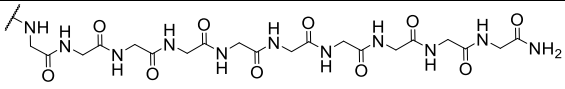
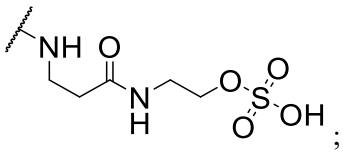


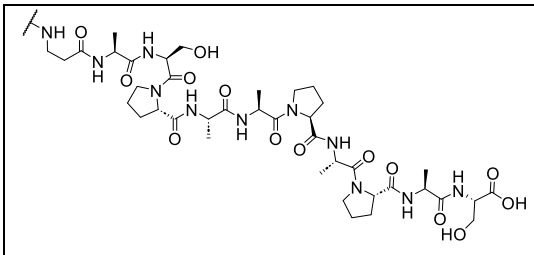
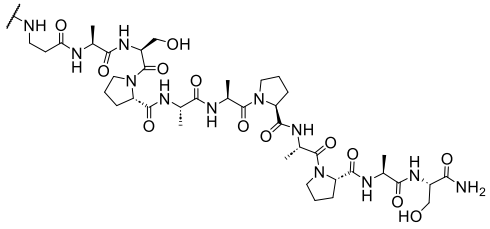
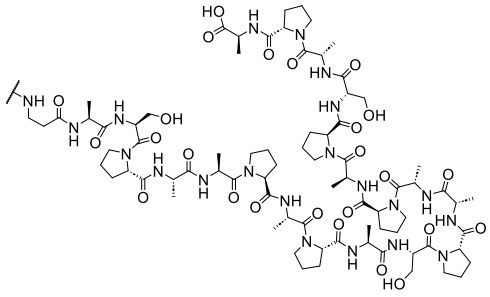
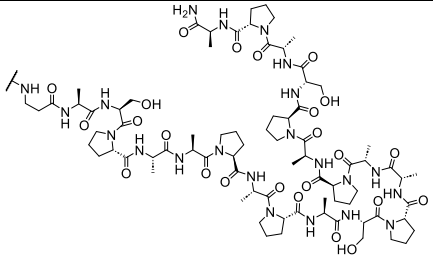
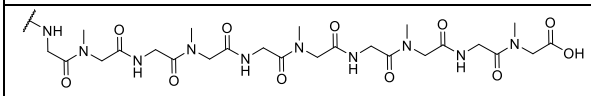
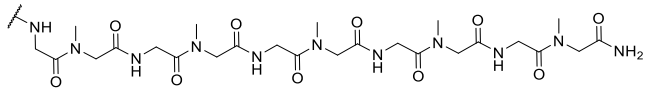
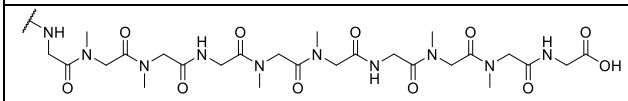
and

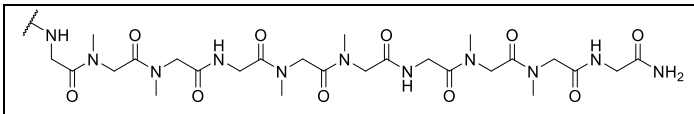


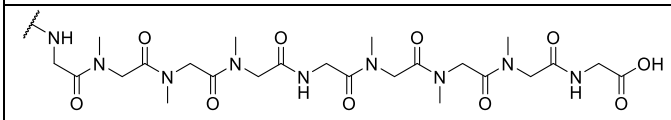
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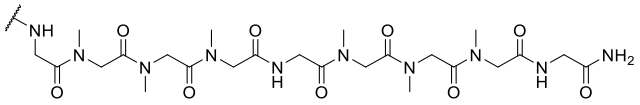
wherein each DAR is a drug to Targeting Unit ratio, wherein the DAR is from about 2 to about 8; and

| wherein each R is independently selected from: |
|---|
|  (SEQ ID NO: 75); |
|  (SEQ ID NO: 75); |
|  ; |

| |
|---|
|  (SEQ ID NO: 70); |
|  (SEQ ID NO: 70); |
|  (SEQ ID NO: 82); |
|  (SEQ ID NO: 82); |
|  (SEQ ID NO: 77); |
|  (SEQ ID NO: 77); |
|  (SEQ ID NO: 73); |


(SEQ ID NO: 73);


(SEQ ID NO: 72); and


(SEQ ID NO: 72).

9. The conjugate or salt of any one of claims 1-8, wherein L is an antibody or antigen-binding portion is selected from a PTK7 antibody, ROR2 antibody, ROR1 antibody, and 5T4 antibody.

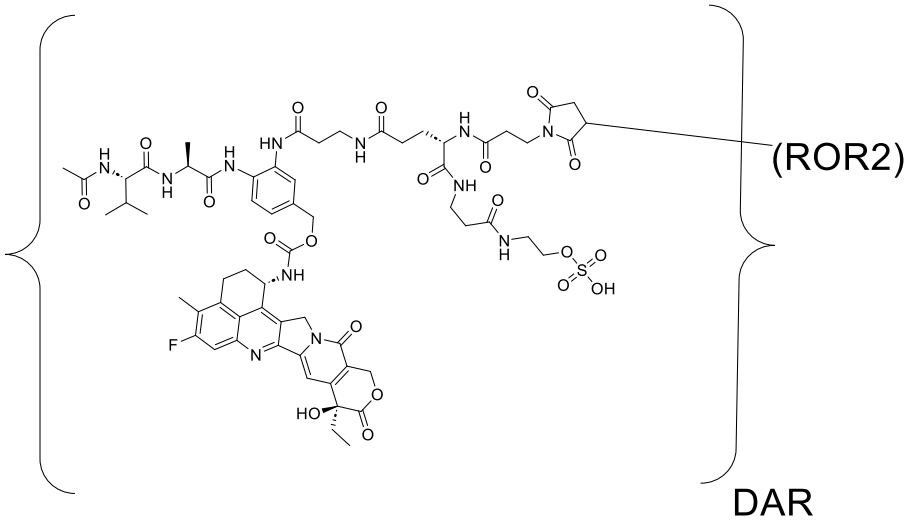
10. The conjugate or salt of any one of claims 1-9, wherein the antibody or antigen-binding portion of L is selected from a ROR1 antibody and ROR2 antibody.

11. The conjugate or salt of any one of claims 1-9, wherein the antibody or antigen-binding portion of L is selected from a 5T4 antibody.

12. The conjugate or salt of any one of claims 1-9, wherein the antibody or antigen-binding portion of L is selected from a PTK7 antibody.

13. The conjugate or salt of any one of claims 1-9, wherein the conjugate is

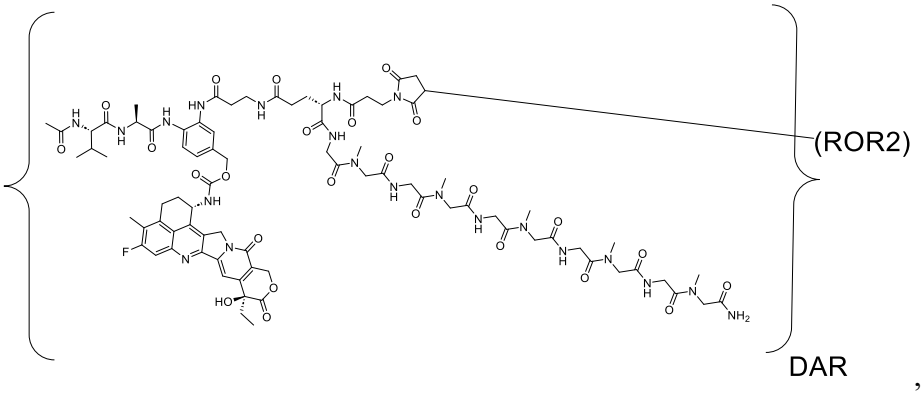
ADC-4




, wherein the DAR is about 8.

14. The conjugate or salt of any one of claims 1-9, wherein the conjugate is

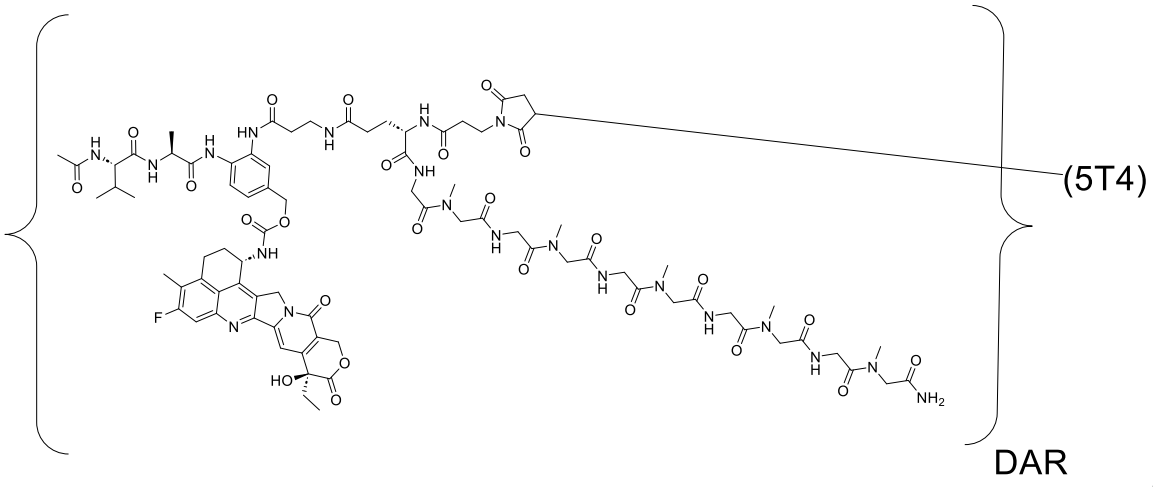
ADC-5




, wherein the DAR is about 8.

15. The conjugate or salt of claim 16, wherein the conjugate is

ADC-7

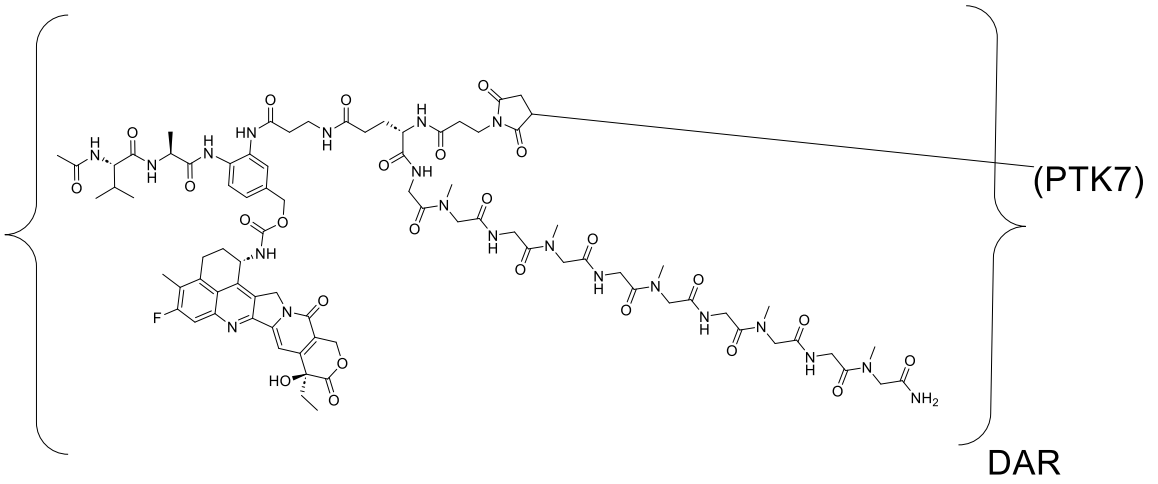



,

wherein the DAR is about 8.

16. The conjugate or salt of any one of claims 1-9, wherein the conjugate is

ADC-8

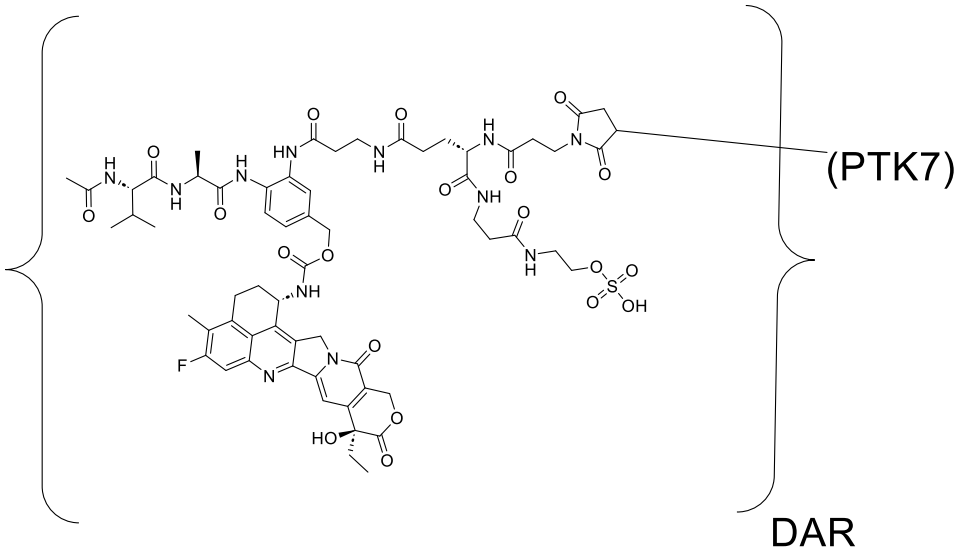



,

wherein the DAR is about 8.

17. The conjugate or salt of any one of claims 1-9, wherein the conjugate is

ADC-9



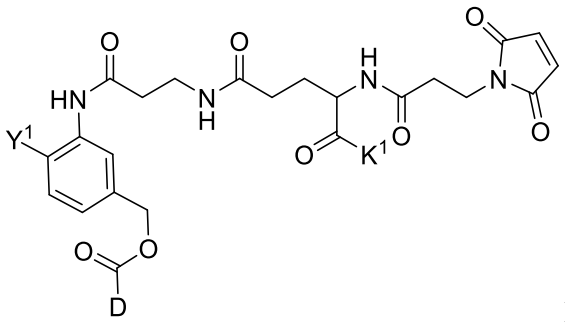

, wherein the DAR is about 8.

18. A pharmaceutical composition comprising a conjugate of any one of claims 1 to 17 and a pharmaceutically acceptable excipient.

19. Use of the conjugate of any one of claims 1 to 17 or a pharmaceutical composition of claim 18 in the manufacture of a medicament for the treatment of a disease or disorder, wherein the disease or disorder is cancer.

20. The use of claim 19, wherein the cancer is selected from: melanoma, skin basal cell cancer, glioblastoma, glioma, gliosarcoma, astrocytoma, meningioma, neuroblastoma, adrenocortical cancer, head and neck cancer (e.g., cancer of the head, neck, nasal cavity, paranasal sinuses, nasopharynx, oral cavity, oropharynx, larynx, hypopharynx, and/or salivary glands, and paragangliomas), oral cancer, salivary gland cancer, nasopharyngeal cancer, breast cancer (e.g., triple negative breast cancer), lung cancer (e.g., non-small cell lung cancer (NSCLC), small cell lung cancer, or squamous cell lung cancer), esophageal cancer, gastroesophageal junction cancer, gastric cancer, gastrointestinal cancer, primary peritoneal cancer, liver cancer, hepatocellular carcinoma, gallbladder cancer, biliary tract cancer, cholangiocarcinoma, colon cancer, rectal cancer, colorectal carcinoma, ovarian cancer, fallopian tube cancer, bladder cancer, upper urinary tract cancer, urothelial cancer, renal cell carcinoma, kidney cancer, genitourinary cancer, cervical cancer, testicular cancer, prostate cancer, fibrosarcoma, liposarcoma, rhabdomyosarcoma (e.g., embryonal rhabdomyosarcoma), leiomyosarcoma, neurofibrosarcoma, synovial sarcoma, liposarcoma, alveolar soft part sarcoma, osteosarcoma, histiocytoma (e.g., malignant fibrous histiocytoma), pancreatic cancer, endometrial cancer, cancer of the appendix, thyroid cancer, advanced Merkel cell cancer, multiple myeloma, sarcomas, choriocarcinoma, leukemia (e.g., erythroleukemia, acute lymphoblastic leukemia, acute monocytic leukemia, acute promyelocytic leukemia, acute myeloid leukemia, acute myelogenous leukemia, chronic myeloid leukemia, chronic myelogenous leukemia, chronic lymphocytic leukemia, acute lymphoblastic leukemia, or mast cell leukemia), lymphoma (e.g., small lymphocytic lymphoma, Burkitt's lymphoma, Hodgkin's lymphoma, non-Hodgkin's lymphoma, diffuse large B cell lymphoma, lymphoplasmacytoid lymphoma, mucosa-associated lymphoid tissue lymphoma, mantle cell lymphoma, T-cell anaplastic large cell lymphoma, follicular lymphoma, monocytic lymphoma, or HTLV- associated T cell leukemia/lymphoma), or mesothelioma.

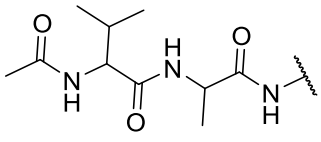
21. A Drug-Linker of Formula (I-A):

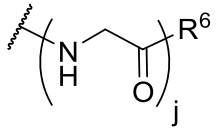
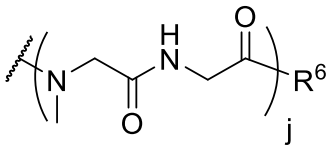
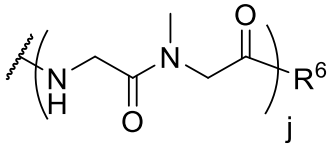
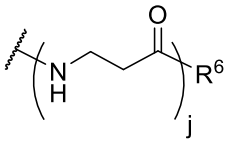


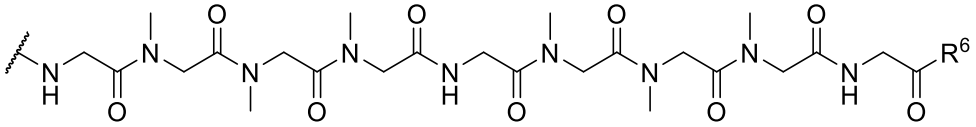

Formula (I-A)

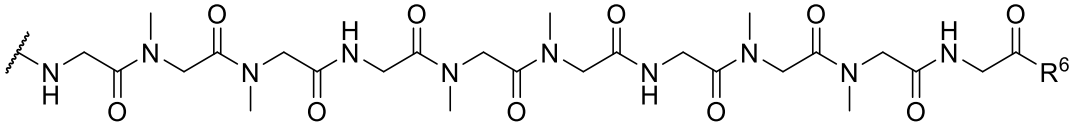
or a pharmaceutically acceptable salt thereof, wherein;

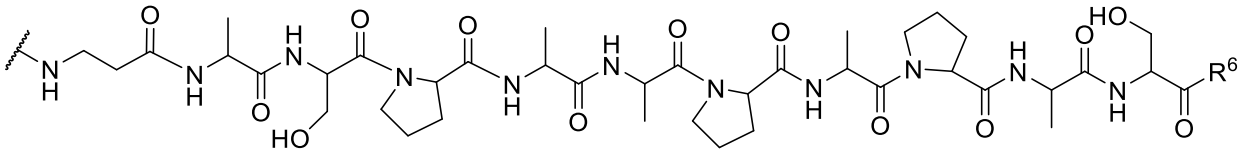
D is selected from a Drug unit;

$Y^1$ is ;

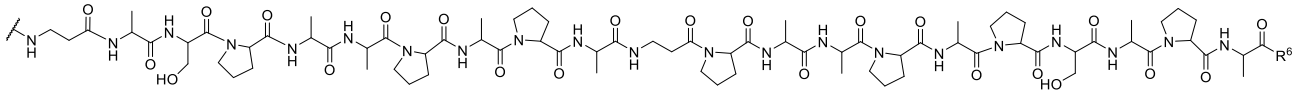
$K^1$ is selected from:  (SEQ ID NO: 66),  (SEQ ID NO: 67),  (SEQ ID NO: 68),  (SEQ ID NO: 69),

 (SEQ ID NO: 72),

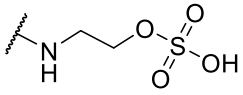
 (SEQ ID NO: 73),



(SEQ ID NO: 70), and

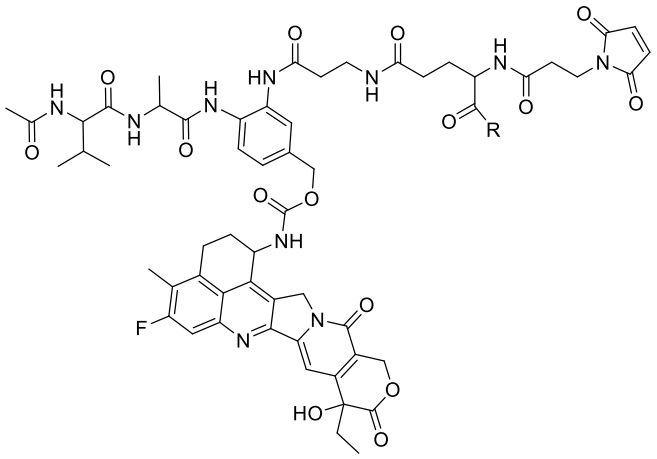


(SEQ ID NO: 71), each j is selected from 1 to 30, and each $R^6$ is selected from -OH, $-NH_2$, and

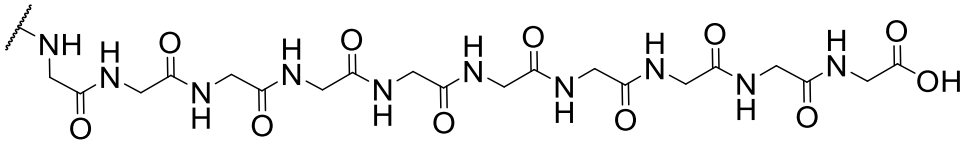
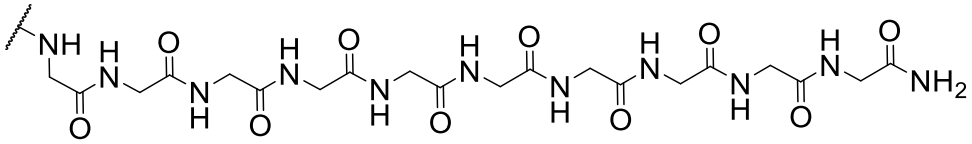
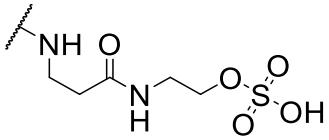
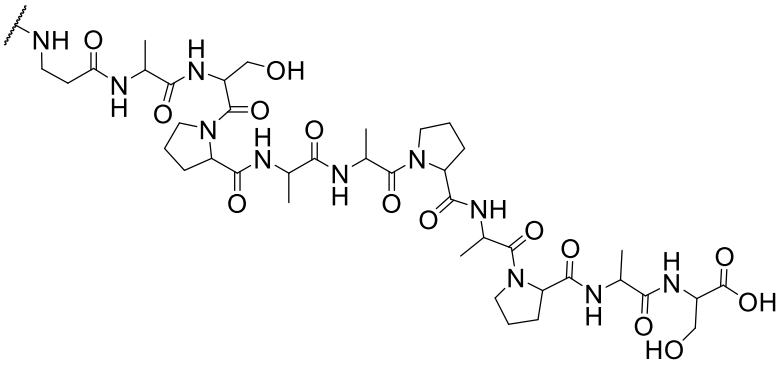
.

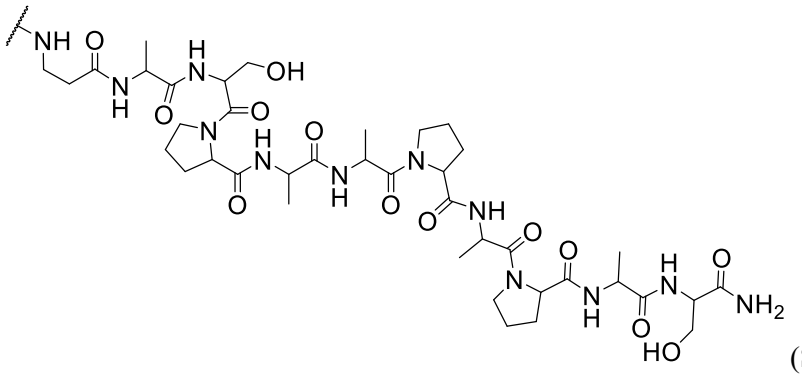
22. The Drug-Linker or salt of claim 21, wherein D is exatecan.

23. The Drug-Linker or salt of claim 21 or 22, wherein the Drug-Linker is selected from:

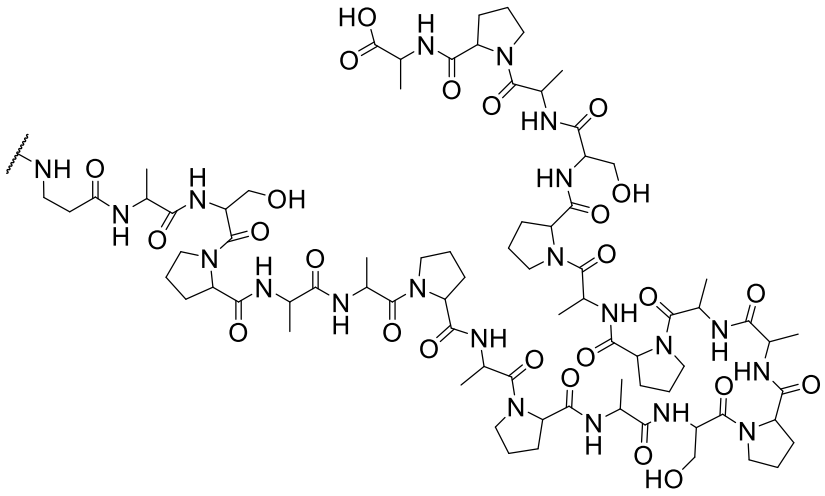


, wherein R is selected from:

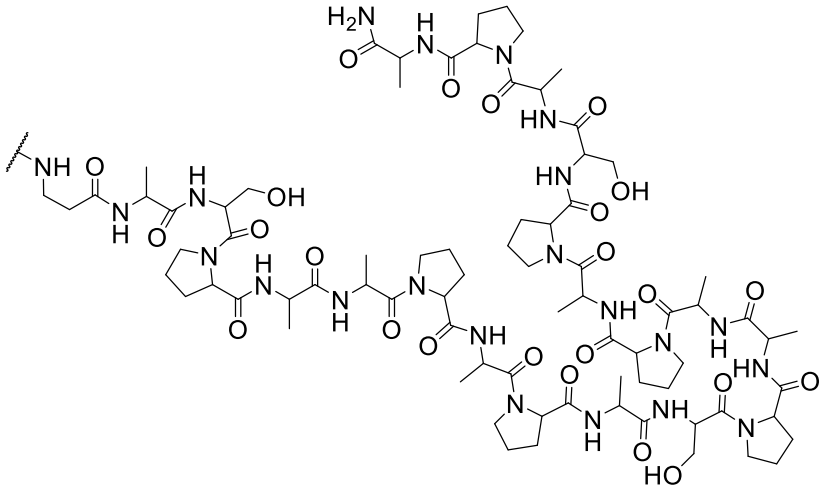
| R |
| --- |
|  (SEQ ID NO: 75) |
|  (SEQ ID NO: 75) |
|  |
|  (SEQ ID NO: 70) |



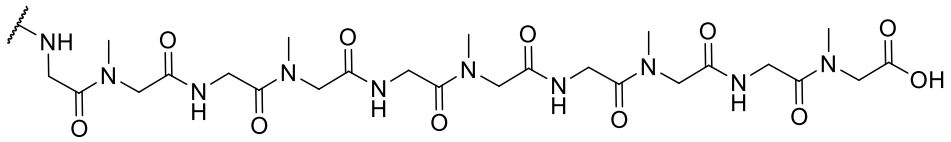
(SEQ ID NO: 70)



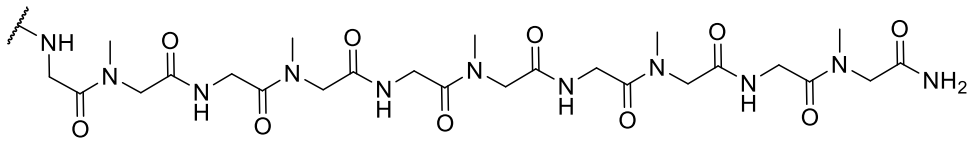
(SEQ ID NO: 82)



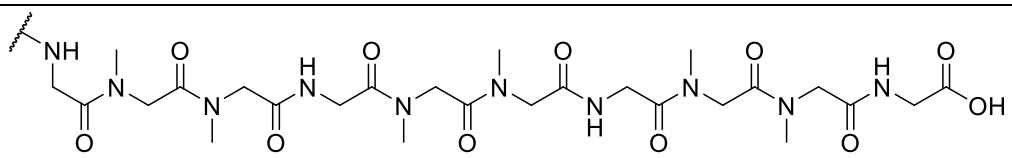
(SEQ ID NO: 82)



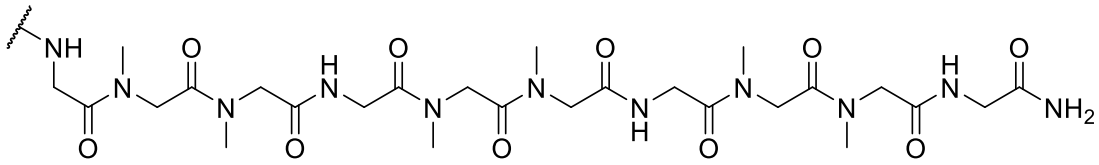
(SEQ ID NO: 77)



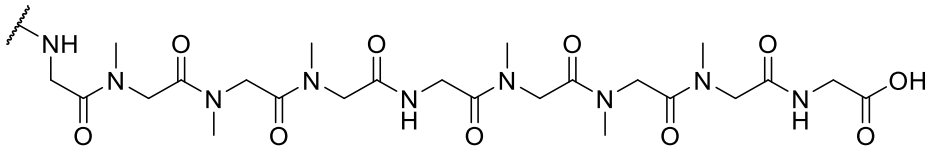
(SEQ ID NO: 77)



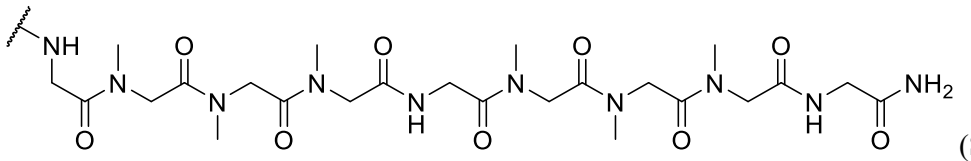
(SEQ ID NO: 73)



(SEQ ID NO: 73)

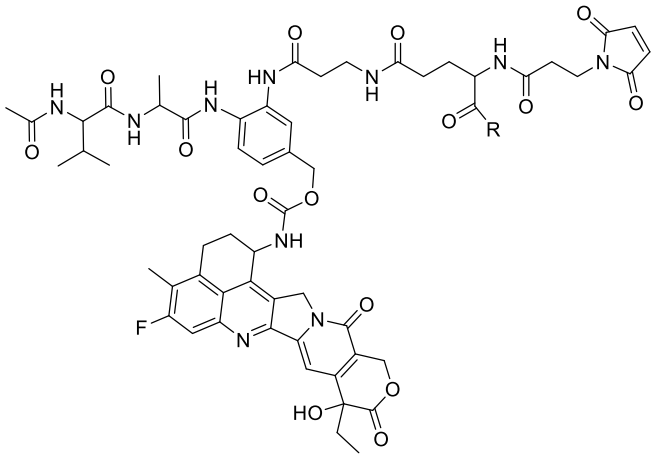


(SEQ ID NO: 72) and

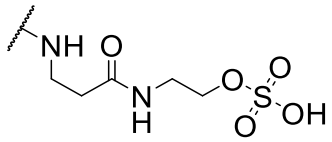
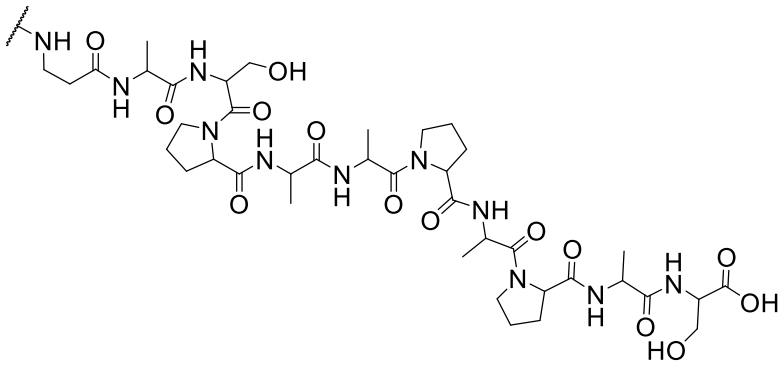
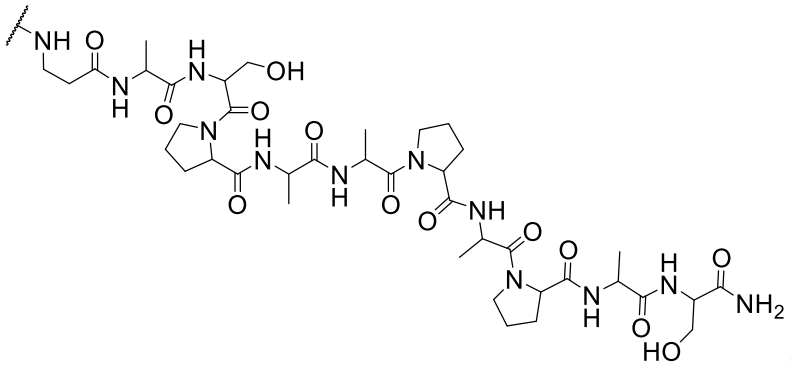
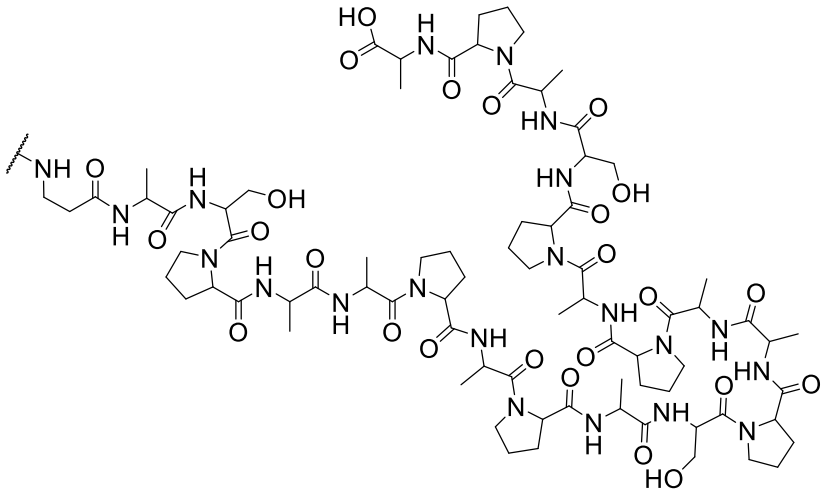


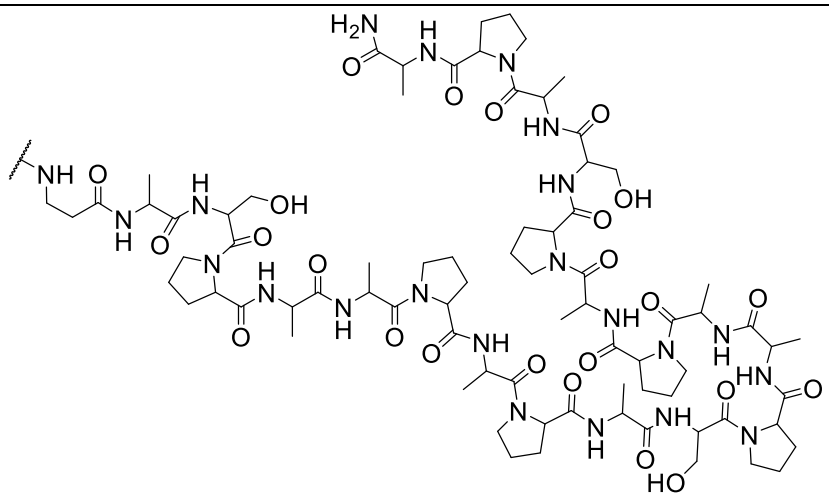
(SEQ ID NO: 72).

24. The Drug-Linker or salt of any one of claims 21-23, wherein the Drug-Linker is selected from:

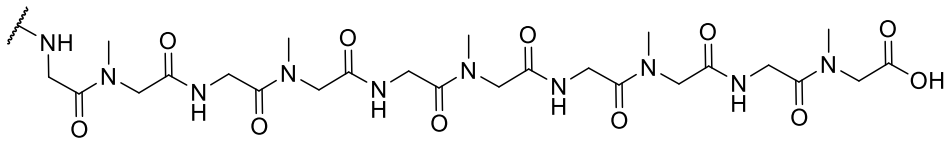


, wherein R is selected from:

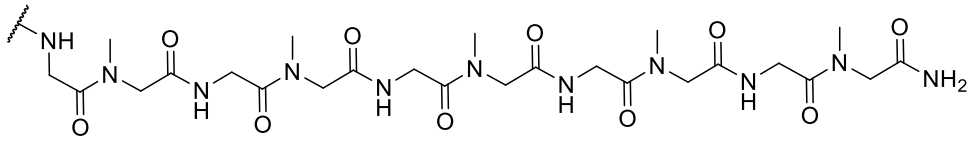
| R |
| --- |
|  |
|  (SEQ ID NO: 70) |
|  (SEQ ID NO: 70) |
|  (SEQ ID NO: 82) |



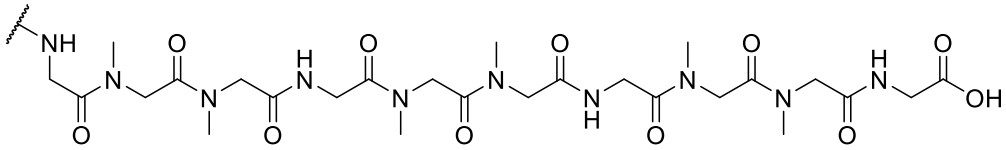
(SEQ ID NO: 82)



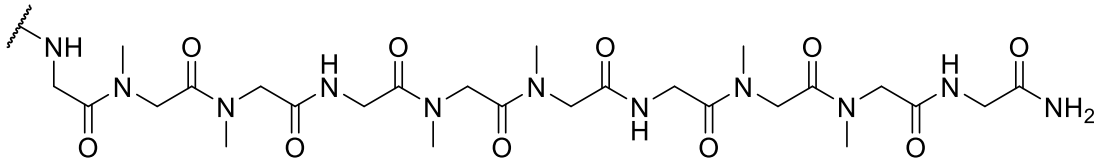
(SEQ ID NO: 77)



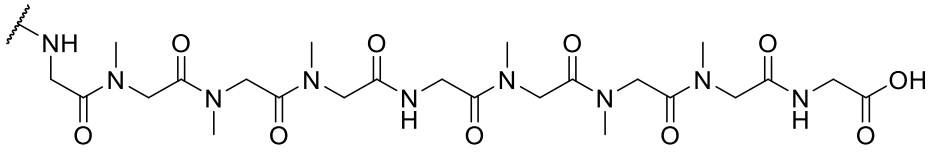
(SEQ ID NO: 77)



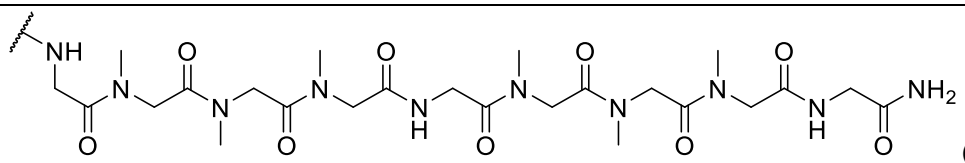
(SEQ ID NO: 73)



(SEQ ID NO: 73)



(SEQ ID NO: 72) and


(SEQ ID NO: 72).