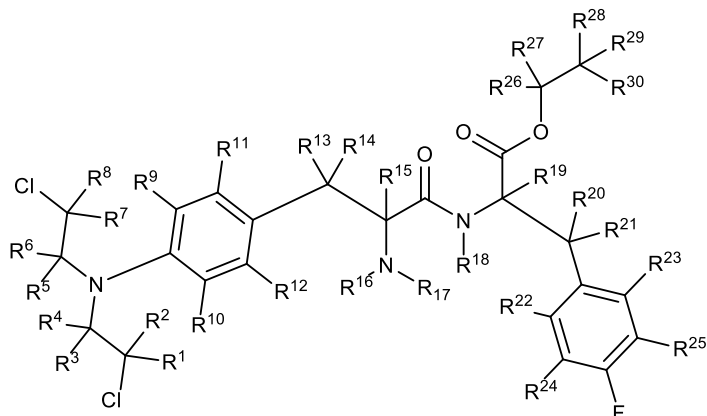


CLAIMS

1. A compound of formula (I), or a pharmaceutically acceptable salt thereof,

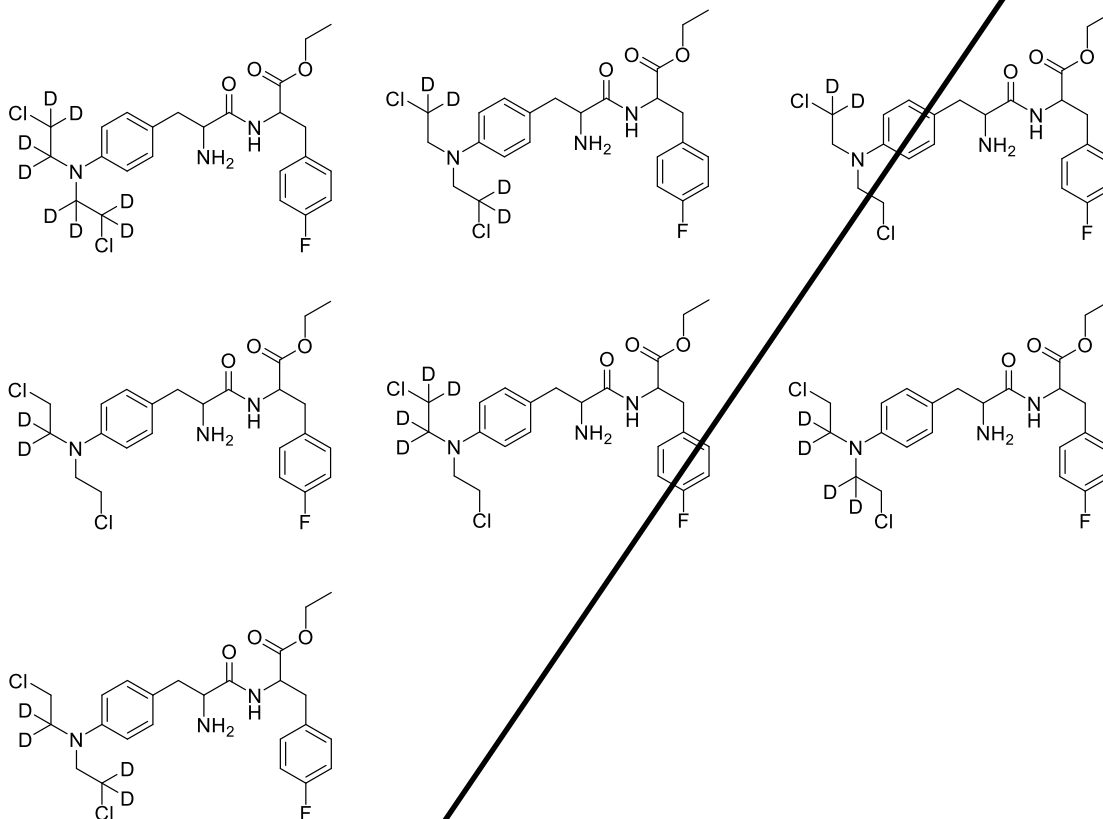


Formula (I)

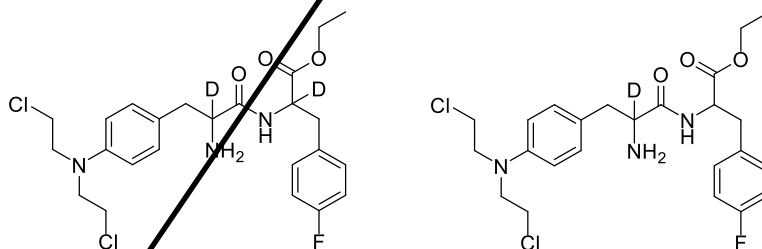
- 5 in which,
- each R^1 - R^{30} is independently selected from the group consisting of H and deuterium, and at least one of R^1 - R^{30} is deuterium with an abundance level of at least 1 mol%, 5 mol%, 10 mol%, 50 mol%, 90 mol% or 98 mol% deuterium.
2. A compound according to Claim 1, in which at least one of R^1 - R^8 is deuterium with an abundance level of at least 5 mol%.
3. A compound according to Claim 1, in which at least one of R^9 - R^{15} is deuterium with an abundance level of at least 5 mol%.
4. A compound according to Claim 1, in which at least one of R^{16} - R^{18} is deuterium with an abundance level of at least 5 mol%.
5. A compound according to Claim 1, in which at least one of R^{19} - R^{25} is deuterium with an abundance level of at least 5 mol%.
6. A compound according to Claim 1, in which at least one of R^{26} - R^{30} is deuterium with an abundance level of at least 5 mol%.
7. A compound according to Claim 6, in which at least two of R^{26} - R^{30} is deuterium, for example in which two of R^{26} - R^{30} are deuterium; or in which three of R^{26} - R^{30} are deuterium; or in which four of R^{26} - R^{30} are deuterium; or in which each of R^{26} - R^{30} are deuterium.

8. A compound according to Claim 7, in which the abundance level is at least 10 mol%, 50 mol%, 90 mol% or 98 mol% deuterium.

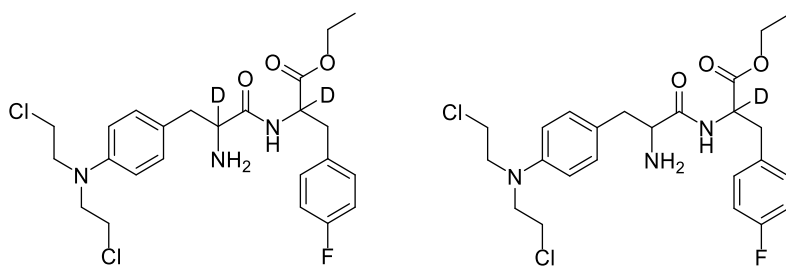
9. A compound according to Claim 2, in which the compound has a structural formula selected from the following group:



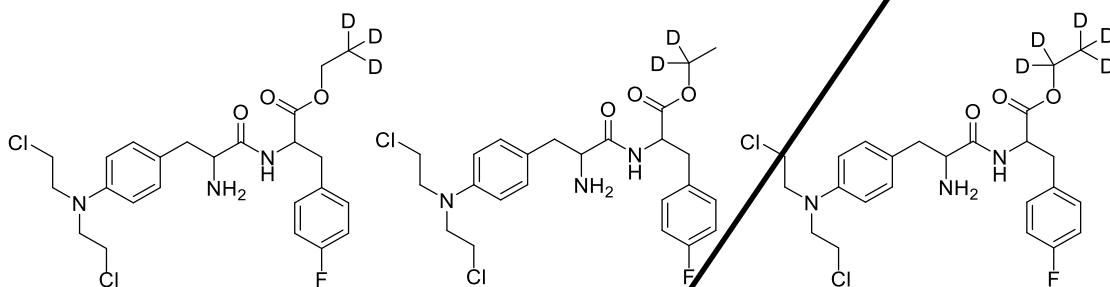
10. A compound according to Claim 3, in which the compound has a structural formula selected from the following group:



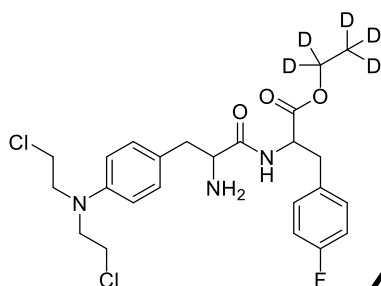
10 11. A compound according to Claim 5, in which the compound has a structural formula selected from the following group:



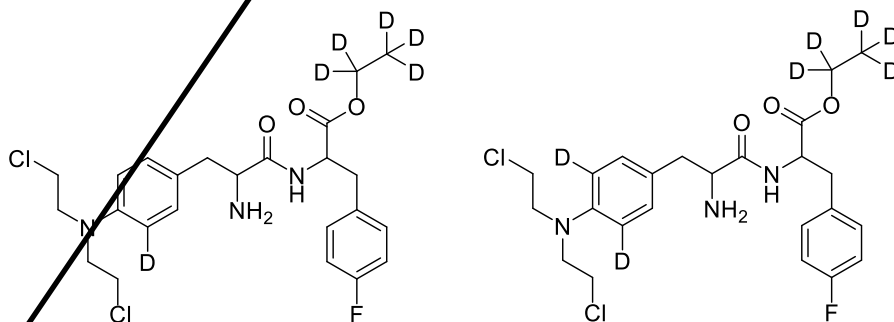
12. A compound according to Claim 6, 7 or 8, in which the compound has a structural formula selected from the following group:



5 13. A compound according to Claim 12, in which the compound has the following structural formula:



14. A compound according to Claim 3 and 6, 7 or 8, in which the compound has the structural formula:



15. A pharmaceutical composition comprising a compound according to any preceding claim, together with a pharmaceutically acceptable carrier, optionally together with an additional therapeutic agent, for example a protease inhibitor (PI), an immunomodulatory drug (IMiD) or an alkylator.

5 16. A compound according to any of Claims 1 to 14 or a pharmaceutical composition according to Claim 15 for use as a medicament.

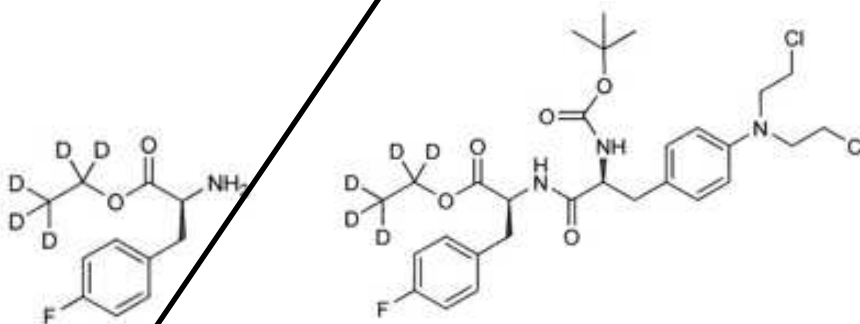
17. A compound according to any of Claims 1 to 14 or a pharmaceutical composition according to Claim 15 for use in the treatment or prophylaxis of cancer.

10 18. A compound according to any of Claims 1 to 14 or a pharmaceutical composition according to Claim 15 for use in the treatment or prophylaxis of multiple myeloma, breast cancer, lung cancer, ovarian cancer, leukaemias and lymphomas.

19. Use of a compound according to any of Claims 1 to 14 in the preparation of a medicament for the treatment or prophylaxis of cancer.

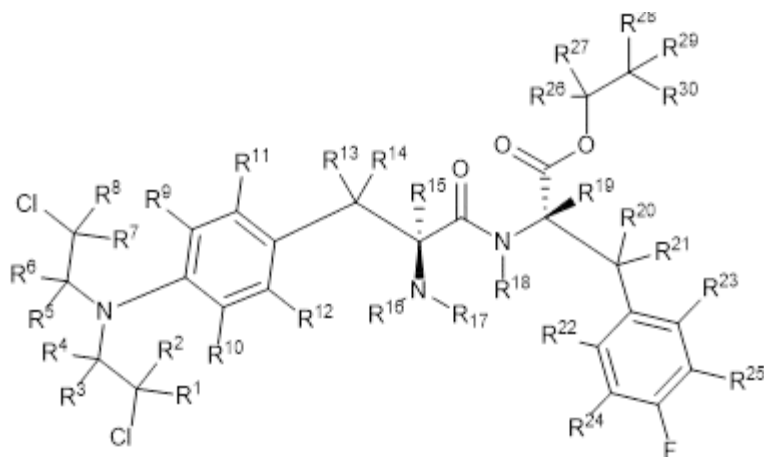
15 20. Use according to Claim 20, in which the cancer is selected from the group consisting of: multiple myeloma, breast cancer, lung cancer, ovarian cancer, leukaemias and lymphomas.

21. A compound having a structural formula selected from the following group:



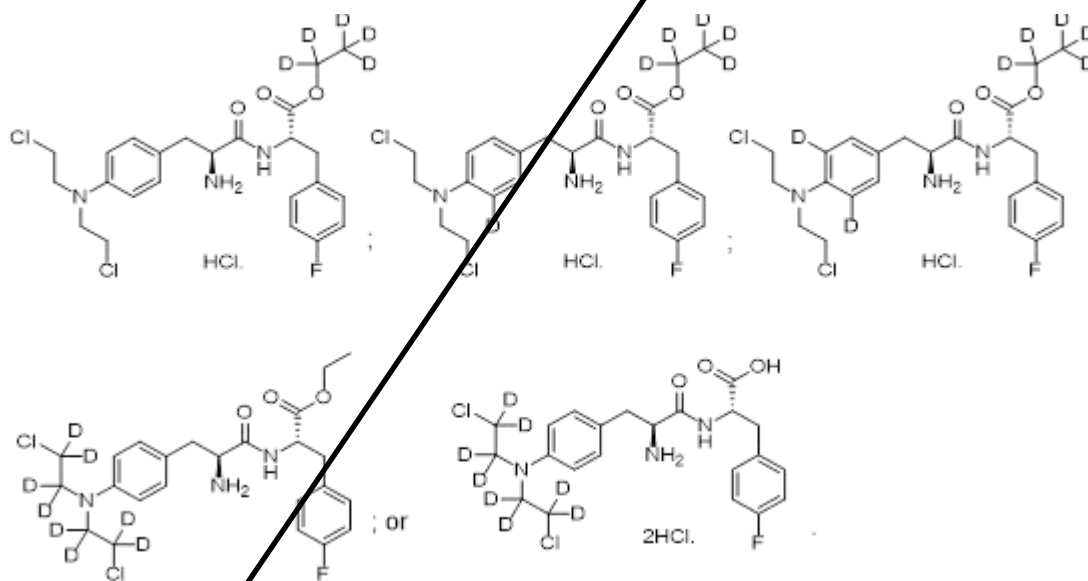
or a pharmaceutically acceptable salt thereof.

20 22. A compound according to Claim 1, or a pharmaceutically acceptable salt thereof, in which the structure is according to formula (Ia)



(Ia).

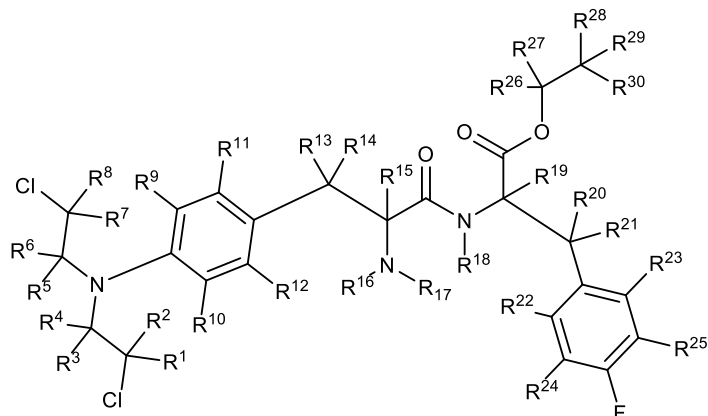
23. A compound according to Claim 1, in which the compound is selected from the group consisting of:



24. A compound according to Claim 1, in which the compound is (²H₅)ethyl (2S)-2-[(2S)-2-amino-3-{4-[bis(2-chloroethyl)amino]phenyl}propanamido]-3-(4-fluorophenyl)propanoate hydrochloride.

CLAIMS

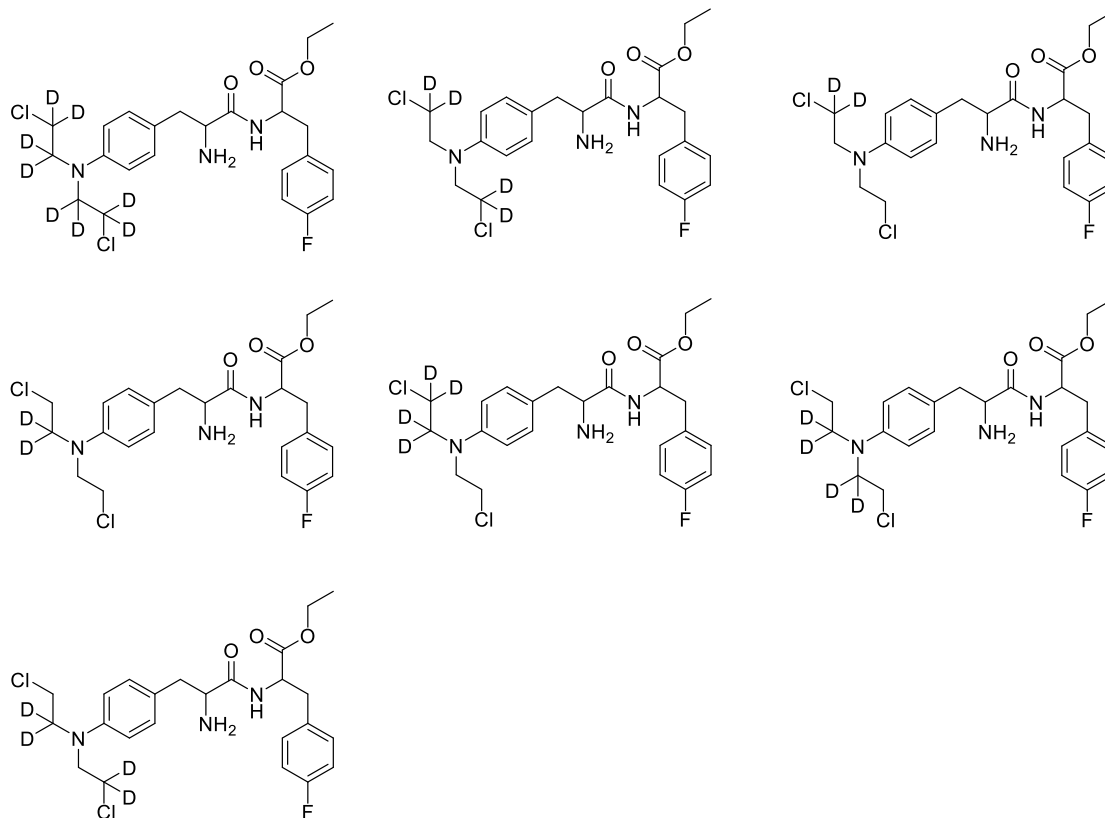
1. A compound of formula (I), or a pharmaceutically acceptable salt thereof,



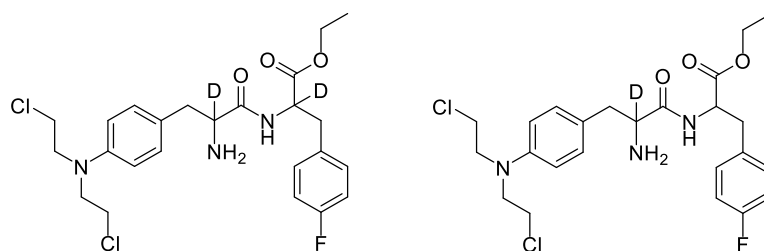
Formula (I)

- 5 in which,
- each R^1 - R^{30} is independently selected from the group consisting of H and deuterium, and at least one of R^1 - R^{30} is deuterium with an abundance level of at least 1 mol% deuterium.
2. A compound according to Claim 1, in which each R^1 - R^{30} is independently selected from the group consisting of H and deuterium, and at least one of R^1 - R^{30} is deuterium with an abundance level of at least 5 mol%, 10 mol%, 50 mol%, 90 mol% or 98 mol% deuterium.
3. A compound according to Claim 1, in which at least one of R^1 - R^8 is deuterium with an abundance level of at least 5 mol%; or at least one of R^9 - R^{15} is deuterium with an abundance level of at least 5 mol%; or at least one of R^{16} - R^{18} is deuterium with an abundance level of at least 5 mol%; or at least one of R^{19} - R^{25} is deuterium with an abundance level of at least 5 mol%; or at least one of R^{26} - R^{30} is deuterium with an abundance level of at least 5 mol%.
4. A compound according to Claim 3, in which at least two of R^{26} - R^{30} is deuterium, for example in which two of R^{26} - R^{30} are deuterium; or in which three of R^{26} - R^{30} are deuterium; or in which four of R^{26} - R^{30} are deuterium; or in which each of R^{26} - R^{30} are deuterium.
5. A compound according to Claim 4, in which the abundance level is at least 10 mol%, 50 mol%, 90 mol% or 98 mol% deuterium.

6. A compound according to Claim 3, in which the compound has a structural formula selected from the following group:

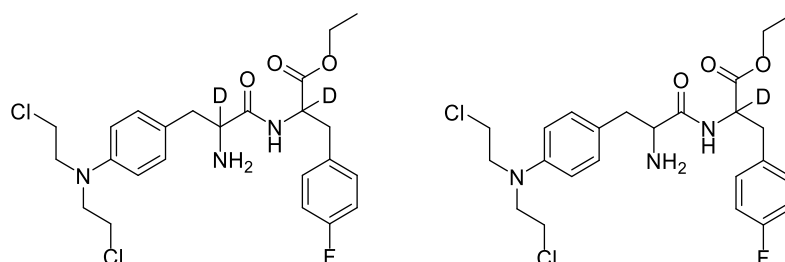


or selected from the following group:

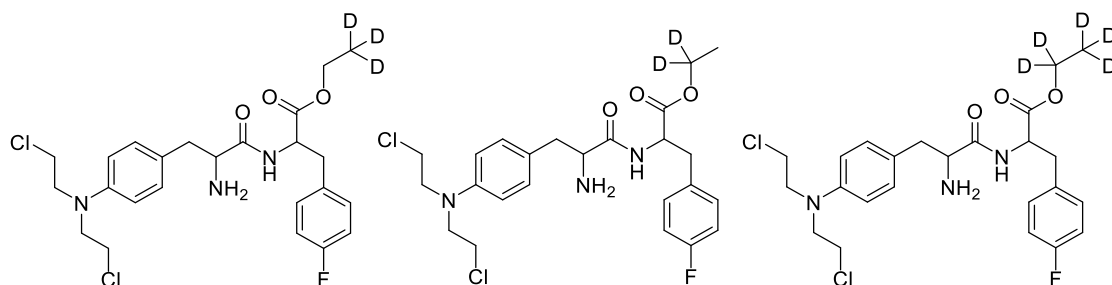


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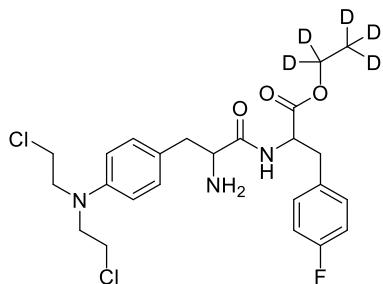
7. A compound according to Claim 3, in which the compound has a structural formula selected from the following group:



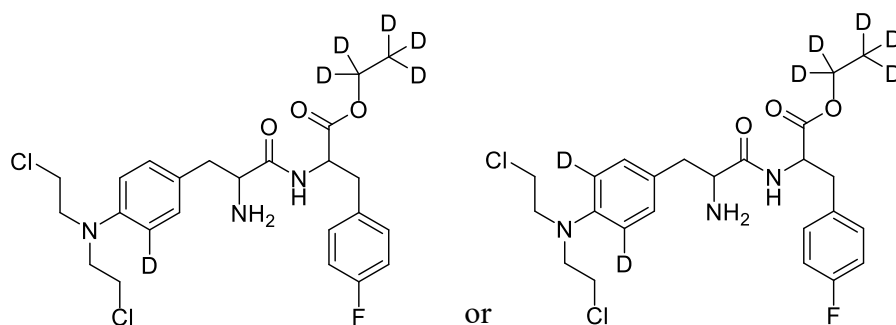
8. A compound according to Claim 3, 4 or 5, in which the compound has a structural formula selected from the following group:



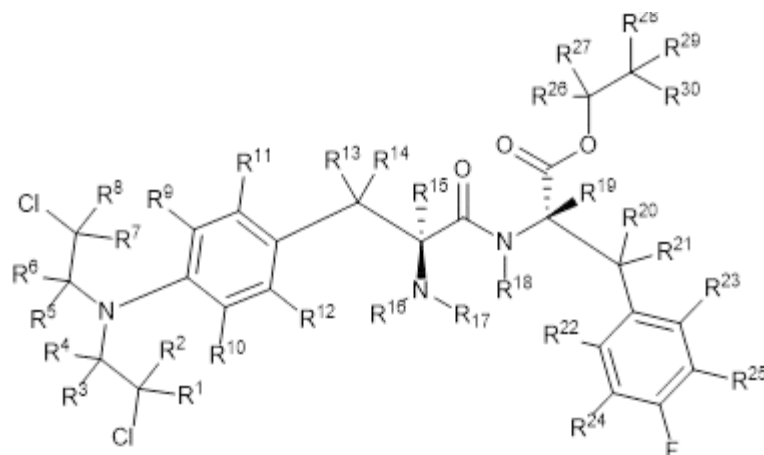
9. A compound according to Claim 8, in which the compound has the following structural formula:



10. A compound according to Claim 3, 4 or 5, in which the compound has the structural formula:

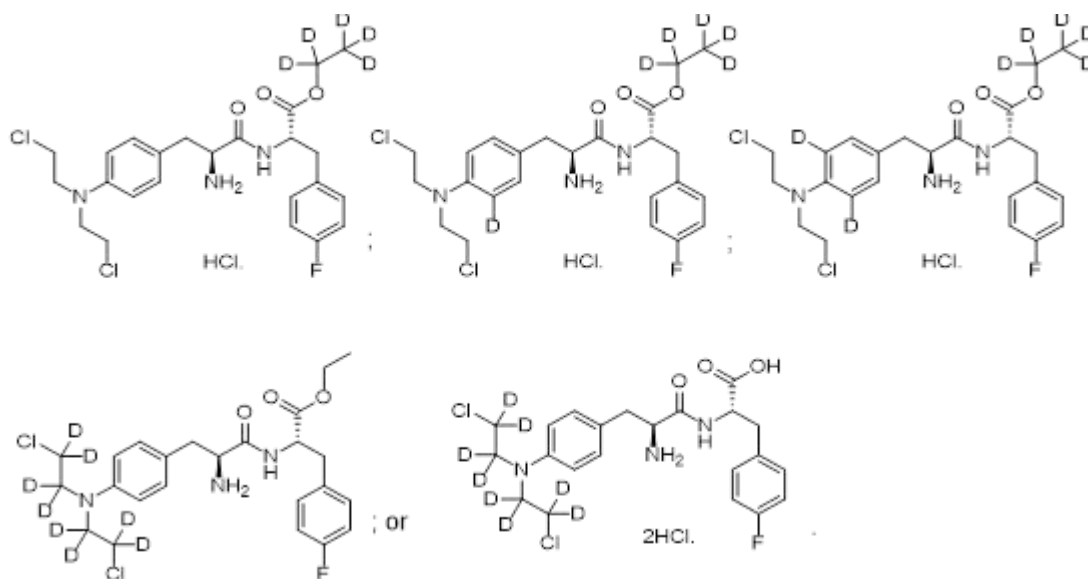


11. A compound according to Claim 1 or 2, or a pharmaceutically acceptable salt thereof, in which the structure is according to formula (Ia)



(Ia).

12. A compound according to Claim 1, in which the compound is selected from the group consisting of:



5

13. A compound according to Claim 1, in which the compound is (²H₅)ethyl (2S)-2-[(2S)-2-amino-3-{4-[bis(2-chloroethyl)amino]phenyl}propanamido]-3-(4-fluorophenyl)propanoate hydrochloride.

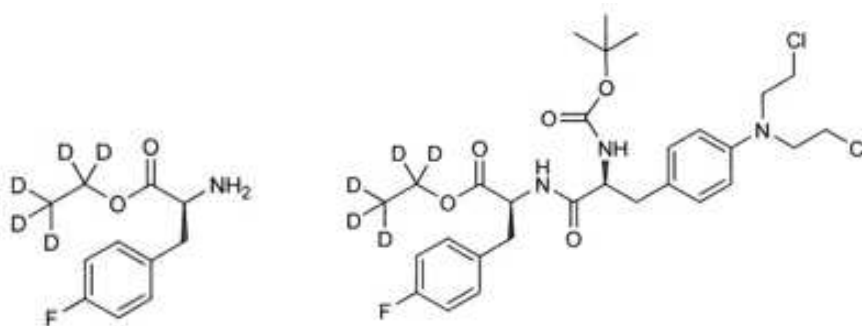
14. A pharmaceutical composition comprising a compound according to any preceding claim, together with a pharmaceutically acceptable carrier, optionally together with an additional therapeutic agent, for example a protease inhibitor (PI), an immunomodulatory drug (IMiD) or an alkylator.

15. A compound according to any of Claims 1 to 13 or a pharmaceutical composition according to Claim 14 for use as a medicament.

16. A compound according to any of Claims 1 to 13 or a pharmaceutical composition according to Claim 14 for use in the treatment or prophylaxis of cancer.

5 17. A compound according to any of Claims 1 to 13 or a pharmaceutical composition according to Claim 14 for use in the treatment or prophylaxis of multiple myeloma, breast cancer, lung cancer, ovarian cancer, leukaemias and lymphomas.

18. A compound having a structural formula selected from the following group:



10 or a pharmaceutically acceptable salt thereof.

19. Use of a compound according to any of Claims 1 to 13 in the preparation of a medicament for the treatment or prophylaxis of cancer.

20. Use according to Claim 19, in which the cancer is selected from the group consisting of: multiple myeloma, breast cancer, lung cancer, ovarian cancer, leukaemias and lymphomas.