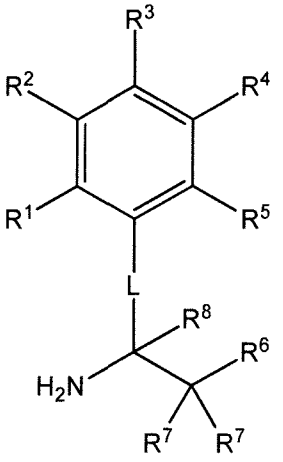
Claims

1. A compound of Formula (1):



(1)

or a pharmaceutically acceptable salt thereof, wherein:

R^1 is selected from $C_{1\text{-}6}$ alkyl and $C_{1\text{-}6}$ alkoxy;

R^4 is $-N(-CH_2-CH_2-R^9)_2$, wherein each R^9 is independently selected from −Cl, −Br, −I, $-OSO_2CH_3$, and $-OSO_2CF_3$;

each of R^2, R^3, and R^5 is independently selected from hydrogen and deuterio;

R^6 is –COOH;

each R^7 is independently selected from hydrogen and deuterio;

R^8 is selected from hydrogen and deuterio; and

L is selected from a bond ("–") and $-CH_2-$.

2. The compound of claim 1, wherein,

L is $-CH_2-$;

R^1 is $C_{1\text{-}6}$ alkyl;

R^4 is $-N(-CH_2-CH_2-Cl)_2$;

each of R^2, R^3, and R^5 is hydrogen;

each R^7 is hydrogen; and

R^8 is hydrogen.

3. The compound of claim 1, wherein,

L is $-CH_2-$;

R^1 is C_{1-6} alkoxy;

R^4 is $–N(–CH_2–CH_2–Cl)_2$;

each of R^2, R^3, and R^5 is hydrogen;

each R^7 is hydrogen; and

R^8 is hydrogen.

4. The compound of claim 1, wherein L is a bond.

5. The compound of claim 1, wherein L is $–CH_2–$.

6. The compound of any one of claims 1, 2, 4 and 5, wherein R^1 is selected from methyl and ethyl.

7. The compound of any one of claims 1 and 3 to 5, wherein R^1 is selected from methoxy and ethoxy.

8. The compound of any one of claims 1 to 7, wherein, the compound of Formula (1) is selected from:

3-amino-3-[5-[bis(2-chloroethyl)amino]-2-methyl-phenyl]propanoic acid (1);

3-amino-4-[5-[bis(2-chloroethyl)amino]-2-methyl-phenyl]butanoic acid (3);

(3S)-3-amino-4-[5-[bis(2-chloroethyl)amino]-2-methyl-phenyl]butanoic acid (5);

(3R)-3-amino-4-[5-[bis(2-chloroethyl)amino]-2-methyl-phenyl]butanoic acid (6);

(3S)-3-amino-4-[5-[bis(2-chloroethyl)amino]-2-methoxy-phenyl]butanoic acid (7);

(3R)-3-amino-4-[5-(2-methylsulfonyloxyethyl(propyl)amino)-2-methyl-phenyl]butanoic acid (11);

(3R)-3-amino-4-[5-(bis(2-bromoethyl)amino)-2-methyl-phenyl]butanoic acid (12)

(3R)-3-amino-4-[5-(2-chloroethyl(2-methylsulfonyloxyethyl)amino)-2-methyl-phenyl]butanoic acid (13);

(3R)-3-amino-4-[5-(2-bromoethyl(2-chloroethyl)amino)-2-methyl-phenyl]butanoic acid (14); and

(3R)-3-amino-4-[5-(2-bromoethyl(2-methylsulfonyloxyethyl)amino)-2-methyl-phenyl]butanoic acid (15);

or a pharmaceutically acceptable salt of any of the foregoing.

9. A pharmaceutical composition comprising the compound of any one of claims 1 to 8 and a pharmaceutically acceptable vehicle.

10. A pharmaceutical composition comprising the compound of claim 8 and a pharmaceutically acceptable vehicle.

11. The use of the compound of any of claims 1-8 in the manufacture of a medicament for the treatment of cancer in a patient comprising a therapeutically effective amount of the compound of any of claims 1-8.

12. The use of the pharmaceutical composition of any of claims 9-10 in the manufacture of a medicament for the treatment of cancer in a patient comprising a therapeutically effective amount of the composition of claim 9 or claim 10.

13. The compound of claim 1, wherein the compound is (3S)-3-amino-4-[5-[bis(2-chloroethyl)amino]-2-methyl-phenyl]butanoic acid (5) or a pharmaceutically acceptable salt thereof.

14. The compound of claim 1, wherein the compound is (3S)-3-amino-4-[5-[bis(2-chloroethyl)amino]-2-methoxy-phenyl]butanoic acid (7) or a pharmaceutically acceptable salt thereof.