4. A pharmaceutical composition according to any one of claims 1 to 3 with the proviso that said composition does not contain S-cyanomethylisothiourea HBr.

5. A pharmaceutical composition according to any one of claims 1 to 3 wherein the compound is S-(3-cyanopropyl)isothiourea or a pharmaceutically acceptable salt thereof.

6. A pharmaceutical composition according to any one of claims 1 to 3 wherein the compound is S-(3-cyanopropyl)isothiourea hydrochloride.

7. A pharmaceutical composition according to any one of claims 1 to 3 comprising a compound selected from S-(2-cyanoethyl)isothiourea, S-(4-cyanobutyl)isothiourea, S-(5-cyanopentyl)-isothiourea, and the pharmaceutically acceptable salts thereof and a pharmaceutically acceptable carrier.

8. A pharmaceutical composition according to any one of claims 1 to 7 wherein the hyperproliferative disease is cellular hyperproliferation and the composition comprises an antihyperproliferation effective amount of a compound of formula I or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

9. A pharmaceutical composition according to any one of claims 1 to 7 wherein the hyperproliferative disease is cancer and the composition comprises an anticancer effective amount of a compound of formula I or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

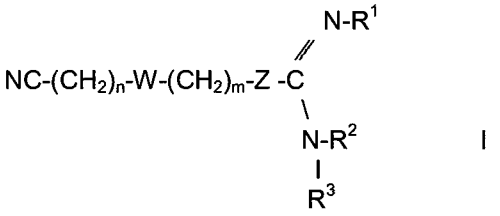
10. A pharmaceutical composition according to any one of claims 1 to 7 and 9 wherein the hyper-proliferative disease is cancer and the composition comprises an apoptosis inducing effective amount of a compound of formula I or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

11. A pharmaceutical composition according to any one of claims 1 to 10 wherein said composition is in dosage unit form.

12. A parenteral pharmaceutical composition according to any one of claims 1 to 11.

13. A pharmaceutical composition according to any one of claims 1 to 12 wherein said mammal is a human.

14. Use of a compound of formula I



I

wherein, Z is sulfur;

wherein n is zero or an integer from 1 to 8 and m is zero or an integer from 1 to 8;

R^1, R^2 and R^3 are independently selected from hydrogen, -CH_2-cyclohexyl, C_1-C_6 alkyl, C_2-C_6 alkenyl, and C_2-C_6 alkynyl, wherein the alkyl moieties of said alkyl, alkenyl and alkynyl groups may be linear, branched and cyclic and combinations of linear, branched and cyclic alkyl ,alkenyl and alkynyl moieties and said groups may be substituted with groups selected from methyl, ethyl, propyl, iso-propyl, n-butyl, t-butyl, methoxy, ethoxy, O-n-propyl, O-isopropyl, O-n-butyl, and O-t-butyl;

W is absent or W is selected from

-CH_2-, -CH_2-CH_2-, trans -CH=CH-, cis -CH=CH-, -C≡C-, or –CHR^4-CHR^5-, trans -C R^4=C R^5-, cis -CR^4=CR^5-, wherein R^4, and R^5 are independently selected from -CH_2-cyclohexyl, C_1–C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, and C_1–C_6 alkyl ether (also referred to as C_1-C_6 alkyl –O-);

or a pharmaceutically acceptable salt thereof for preparation of a medicament for treating hyper-proliferative diseases, inflammatory diseases, viral infections or bacterial infections.

15. A use according to claim 14 wherein the hyperproliferative disease is cellular hyperproliferation and an antihyperproliferation effective amount of a compound of formula I or a pharmaceutically acceptable salt thereof is administered.

16. A use according to claim 14 wherein the hyperproliferative disease is cancer and an anticancer effective amount of a compound of formula I or a pharmaceutically acceptable salt thereof is administered.

17. A use according to claim 14 or 16 wherein the hyperproliferative disease is cancer and an apoptosis inducing effective amount of a compound of formula I or a pharmaceutically acceptable salt thereof is administered.

18. A use according to claim 14 wherein the hyperproliferative disease is selected from the group consisting of cancer of the breast, bladder, bone, brain, central and peripheral nervous system, colon, endocrine glands, esophagus, endometrium, germ cells, head and neck, kidney, liver, lung, larynx and hypopharynx, mesothelioma, sarcoma, ovary, pancreas, prostate, rectum, small intestine, soft

moieties and said groups may be substituted with groups selected from methyl, ethyl, propyl, iso-propyl, n-butyl, t-butyl, methoxy, ethoxy, O-n-propyl, O-isopropyl, O-n-butyl, and O-t-butyl;

W is absent or W is selected from

$-CH_2-$, $-CH_2-CH_2-$, trans -CH=CH-, cis -CH=CH-, -C≡C-, or $-CHR^4-CHR^5-$, trans -C R^4=C R^5-, cis -CR^4=CR^5-, wherein R^4, and R^5 are independently selected from -CH_2-cyclohexyl, C_1–C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, and C_1–C_6 alkyl ether (also referred to as C_1-C_6 alkyl –O-);

or a pharmaceutically acceptable salt thereof, with the proviso that the compound is not S-(cyanomethyl)iso-thiourea HCl, S-(cyanomethyl)isothiourea HBr, S-(2-cyanoethyl)isothiourea HCl, S-(2-cyanoethyl)-isothiourea HBr, S-(2-cyanoethyl)isothiourea p-toluenesulfonate, S-(3-cyanopropyl)-isothiourea HCl, or S-(3-cyanopropyl)isothiourea picrate.

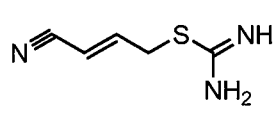
31. A compound according to claim 30 with the proviso that the compound is not a hydrobromide salt of S-(3-cyanopropyl)isothiourea .

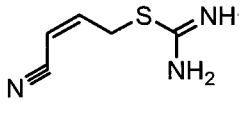
32. A compound according to claim 30 with the proviso that the compound is not a pharmaceutically acceptable salt of S-(cyanomethyl)isothiourea, S-(2-cyanoethyl)isothiourea, or S-(3-cyanopropyl)-isothiourea.

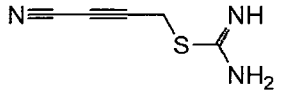
33. A compound according to claim 30 or a pharmaceutically acceptable salt thereof, with the proviso that the compound is not selected from S-(cyanomethyl)isothiourea, S-(2-cyanoethyl)isothiourea, and S-(3-cyanopropyl)isothiourea and pharmaceutically acceptable salts thereof.

34. A compound according to claim 30 selected from S-(4-cyanobutyl)isothiourea, and S-(5-cyanopentyl)-isothiourea and the pharmaceutically acceptable salts thereof.

35. A compound selected from the group of compounds consisting of







and the pharmaceutically acceptable salts thereof.