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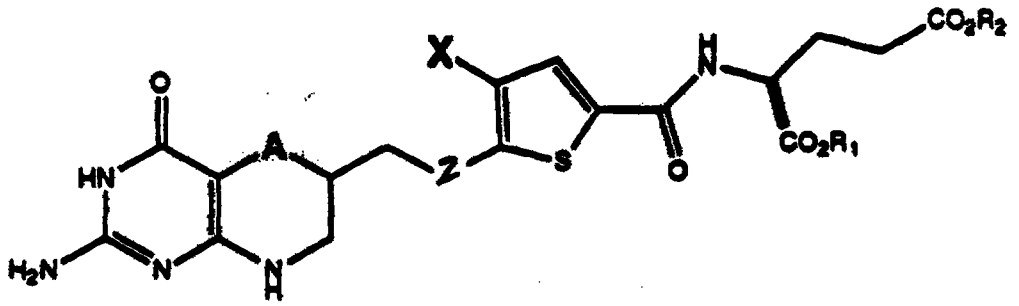
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(I)

(57) Abstract

Compounds of formula (I), which are in equilibrium with their 4-hydroxy tautomers and are in the form of diastereomeric mixtures, and their pharmaceutically acceptable salts are potent GARFT inhibitors. A is S, CH_2 or Se; Z is a substituted or unsubstituted C_1-C_3 alkyl, C_2-C_3 alkenyl, C_2-C_3 alkynyl or amino group, or S or O; X is a substituted or unsubstituted C_1-C_6 alkyl group; a substituted or unsubstituted C_2-C_6 alkynyl group; a substituted or unsubstituted C_2-C_6 alkynyl group; -C(O)E, wherein E is hydrogen, a substituted or unsubstituted C_1-C_3 alkyl group, a substituted or unsubstituted C_2-C_3 alkenyl group, a substituted or unsubstituted C_2-C_3 alkynyl group, a substituted or unsubstituted OC_1-C_3 alkoxy group, or $NR_{10}R_{11}$, wherein R_{10} and R_{11} are independently selected from hydrogen, substituted and unsubstituted C_1-C_3 alkyl groups, substituted and unsubstituted C_2-C_3 alkenyl groups, substituted and unsubstituted C_2-C_3 alkynyl groups; $NR_{10}R_{11}$, wherein R_{10} and R_{11} are independently defined as set forth above; hydroxyl; nitro; SR_{12}, wherein R_{12} is hydrogen, a substituted or unsubstituted C_1-C_6 alkyl group, a substituted or unsubstituted C_2-C_6 alkenyl group, or a substituted or unsubstituted C_2-C_6 alkynyl group; cyano; or a substituted or unsubstituted C_1-C_3 alkoxy group; and R_1 and R_2 are independently hydrogen or a moiety that forms with the attached CO_2 a readily hydrolyzable ester group. These compounds and their salts are useful as antiproliferative agents. The invention also pertains to pharmaceutical compositions and methods employing such compounds as GARFT inhibitors or antiproliferative agents. The invention also relates to compounds useful as intermediates for preparing such compounds, and to their synthesis.

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