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(54) Title: IRREVERSIBLE INHIBITORS OF MENIN-MLL INTERACTION

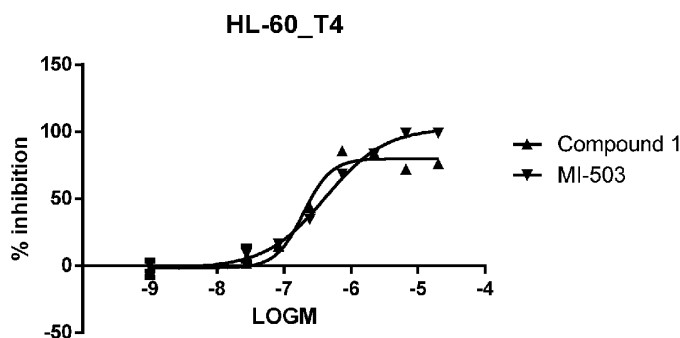


Figure 1

(57) Abstract: Disclosed herein are heterocyclic compounds that inhibit the binding of menin and MLL or MLL fusion proteins. Also described are specific irreversible inhibitors of menin-MLL interaction. Also disclosed are pharmaceutical compositions that include the compounds. Methods of using the menin-MLL irreversible inhibitors are disclosed, alone or in combination with other therapeutic agents, for the treatment of autoimmune diseases or conditions, heteroimmune diseases or conditions, cancer, including lymphoma, leukemia and other diseases or conditions dependent on menin-MLL interaction.

[Continued on next page]



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