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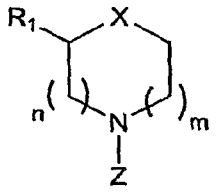
(54) **Title:** THERAPEUTIC PIPERAZINES AS PDE4 INHIBITORS



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(57) **Abstract:** The invention includes a compound of formula I; wherein R_1, X, Z, n, and m have any of the values described herein, as well as salts of such compounds, compositions comprising such compounds, and therapeutic methods that comprise the administration of such compounds. The compounds are inhibitors of PDE4 function and are useful for improving cognitive function in animals.

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