

SYNTHESIS OF PYRIMIDINE "ANALOGS" OF NATURAL POLYAMINES

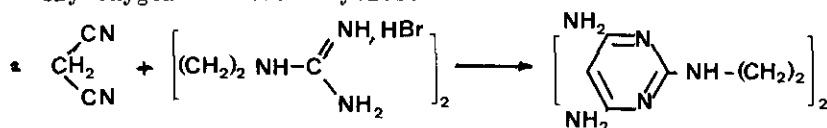
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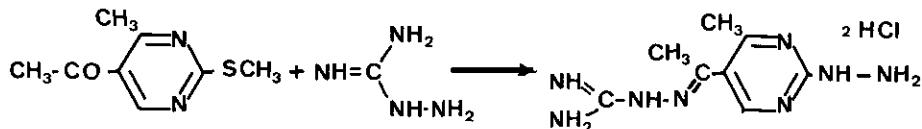
Chemical structures related to natural polyamines (putrescine, spermidine, spermine), have exhibited antitumoral activity (e.g.: Me-GAG, DDUG).

Among compounds prepared so far in view of testing their activities as analogs of polyamines and antitumoral drugs none integrated a pyrimidine ring in their structure. We therefore devised several routes of access to pyrimidines substituted in such a way that they could be mistaken by cells for natural polyamines :

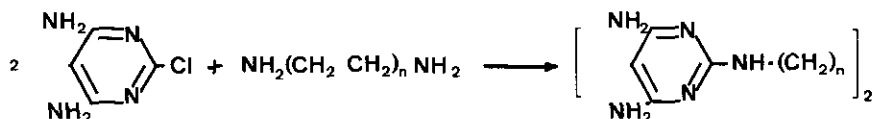
1°) Synthesis of polymethylene-bis-guanidines; and condensation on: malononitrile, β -dicarbonylated structures or suitably oxygenated heterocycles.



2°) Reaction of aminoguanidine with 5-acetyl-2-amino-4-methyl-2-methylthio pyrimidine and 5-acetyl-4-methyl-2-methylthio pyrimidine.



3°) Substitution of 4,6-diamino-2-methylthio pyrimidine or 4,6-diamino-2-chloro pyrimidine with different types of amines.



Some unexpected chemical reactions will be interpreted.