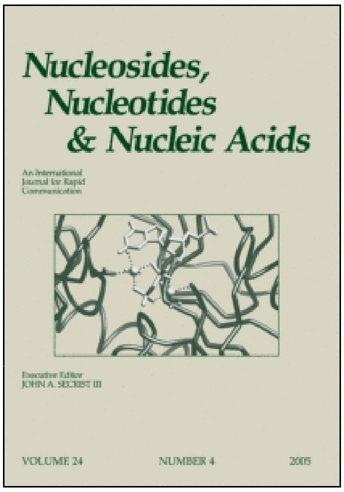

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Synthesis of 7-Glycopyranosyl-5-oxq-pyrrolo[2,3-d]Pyrimidine and 4-Glyco Pyranosylamino-Furo[2,3-d]Pyrimidine Derivatives

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SYNTHESIS OF 7-GLYCOPYRANOSYL-5-OXO-PYRROLO[2,3-d]PYRIMIDINE AND 4-GLYCOPYRANOSYLAMINO-FURO[2,3-d]PYRIMIDINE DERIVATIVES

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Abstract: The synthesis of some glycosyl derivatives of furo[2,3-d] and pyrrolo[2,3-d]pyrimidines is described.

The reactions of 4-glycosylaminopyrimidine derivatives[1] **1** with chloracetyl chloride drive to the compounds **2**, **3** and **4**, being the yields different depending on the solvents used (anhydrous chloroforme or ethyl acetate). The compounds **2** are the main product of reaction in ethyl acetate whereas the compounds **3** are the minority in both solvents and the yield of the compounds **4** becomes higher in chloroforme.

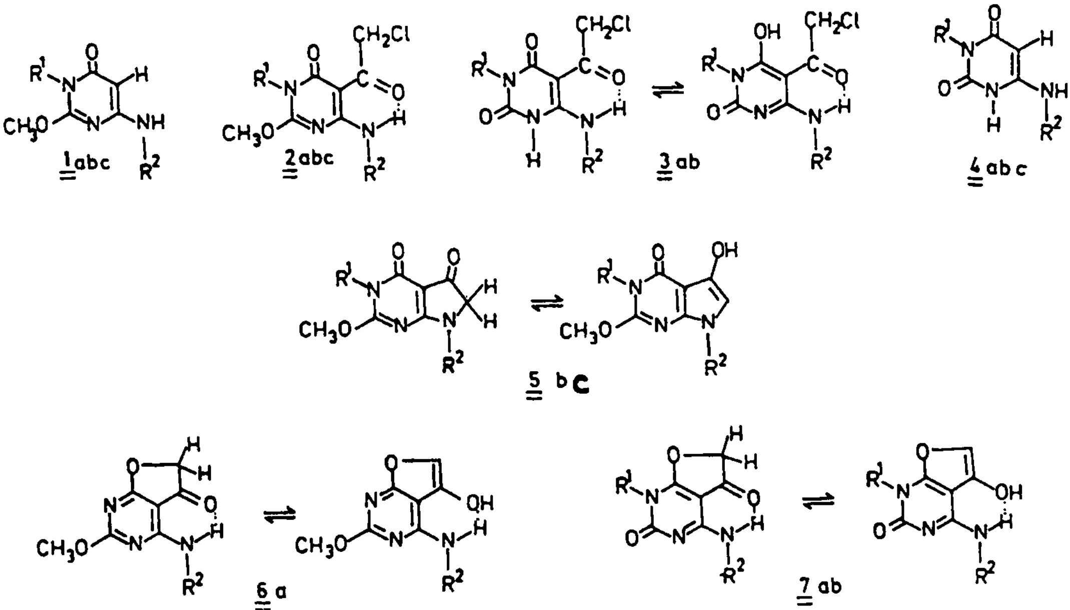
Furo[2,3-d]pyrimidine derivatives **6** and pyrrolo[2,3-d]pyrimidine **5** were obtained by reaction of the compounds **2** in anhydrous K_2CO_3/ DMF solutions[2].

It has been proved a higher reactivity of the C_6-OH group (which is present due to the tautomeric equilibrium whem R^1= H) than C_4-NH group.

So, the reaction products are always furo[2,3-d]pyrimidine derivatives **6** and **7** when R^1= H, whereas the pyrrolo[2,3-d]pyrimidine derivatives **5** are obtained when R^1= CH_3.

All the compounds obtained were purified using colunm chromatography on silica gel and then by EtOH recrystallization. The proposed structures are in accordance with the spectroscopic data.

Using ^{1}H-NMR spectroscopy the hydrogen bridge bonds drawn in the scheme have been detected and likewise the existence of the tautomeric equilibria showed in the scheme was proved.



COMPOUNDS	R^1	R^2
a	H	2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl
b	CH_3	2,3,4-tri-O-acetyl-β-D-xylopyranosyl
c	CH_3	2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl

SCHEME 1

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