Anellation and Ring Transformations of Push-pull-functionalized Deoxypyranosiduloses

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Dedicated to Professor Gerhard Maas on the occasion of his 60th birthday

Reaction of (*E*)-3-aminomethylene-α-D-*erythro*-hexopyranosid-2-ulose **5** with substituted 5-aminopyrazoles afforded the pyrano-anellated pyrazolo[1,5-*a*]pyrimidines **8**. The treatment of the corresponding (*E*)-2-aminomethylene-α-D-*erythro*-hexopyranosid-3-ulose **6** with 5-aminopyrazoles and (benzimidazol-2-yl)acetonitrile yielded in a ring transformation process the D-erythronoyl-pyrazolo[1,5-*a*]pyrimidine-3-carbonic acid derivatives **10** and D-erythronoyl-pyrido[1,2-*a*]benzimidazole-4-carbonitrile (**12**), respectively.

Key words: Nucleoside Analogs, Push-pull Alkenes, Enaminones, Pyrazolo[1,5-*a*]pyrimidines, Pyrido[1,2-*a*]benzimidazole, Ring Transformations