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Nucleosides, Nucleotides and Nucleic Acids

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713597286>

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To cite this Article Hebl, Johann , Polsterer, Johann and Zbiral, Erich(1989) 'Synthesis of Glycofuranosyl - formamides, - isocyanides and - isocyanates - Useful synthons for new approaches to nucleosid analogues', *Nucleosides, Nucleotides and Nucleic Acids*, 8: 5, 885 — 886

To link to this Article: DOI: 10.1080/07328318908054236

URL: <http://dx.doi.org/10.1080/07328318908054236>

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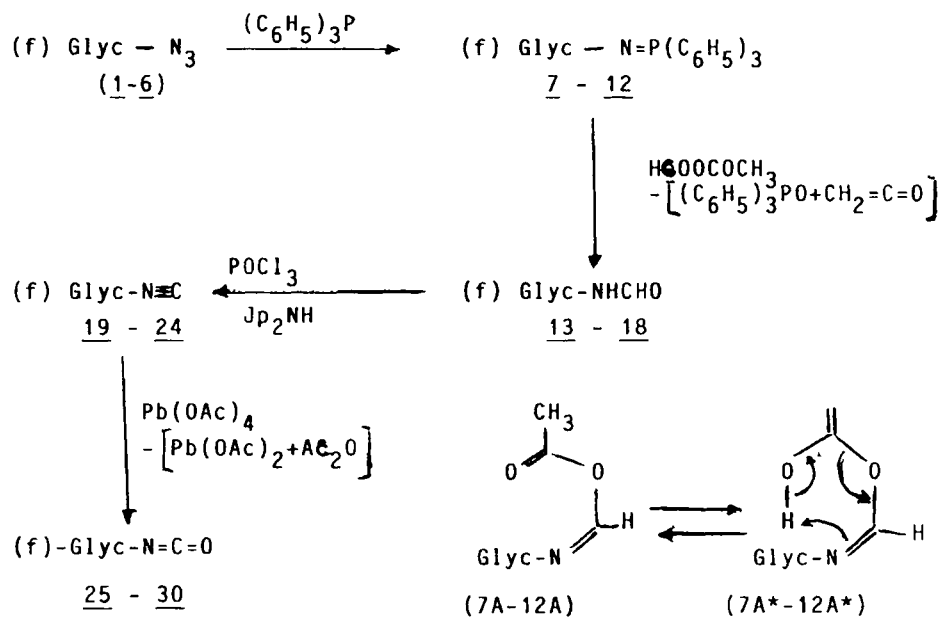
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Synthesis of Glycofuranosyl - formamides, -isocyanides
and - isocyanates - Useful synthons for new
approaches to nucleosid analogues

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Glycofuranosylazides, 1-6 can be easily prepared by reacting various derivatives of glycofuranosyl-1-acetates with trimethylsilylazide and trimethylsilyl trifluoromethyl sulfonate ¹⁾. They are suitable starting materials for the synthesis of various nucleosid analogues. ¹⁻⁵⁾ In order to find new ways to prepare the title compounds, which represent functionally useful derivatives for further transformations we envisaged a sequence shown in Scheme 1. Staudinger reaction of 1-6 gives the Glycofuranosyl-P-N-glides 7-12 which turned immediately by reacting with formylacetate via the E-iminoacetate intermediates (7A-12A) respectively their enolic tautomers 7A*-12A* (Scheme 1) to the glycofuranosyl-formamides 13-18. The transformation to the corresponding glycofuranosyl-1-isocyanides 19-24 was performed according the procedure of Ugi ⁶⁾. Whereas the glycopyranosylformamides as well as - isocyanides are well known products ^(7,8), the furanoid analogues are practically unknown. In the last step the glycofuranosylisocyanides are oxidized with lead tetraacetate in an easily practicable way to the corresponding Isocyanates 25-30.



(f)-Glyc: various derivatives of ribo-, xylo-, apio-, 6-deoxy-glucos-, 6-deoxy-D-allo- and 6-Deoxy-L-talofuranose

Scheme 1

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