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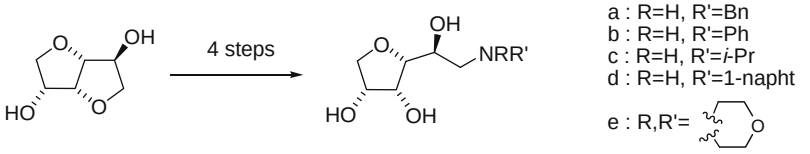
Preliminary Communication

Synthesis and glycosidase inhibitory activity of 1-amino-3,6-anhydro-1-deoxy-D-sorbitol derivatives **pp 43–47**

Stéphane Guillarme, Jean-Bernard Behr,* Claudia Bello, Pierre Vogel and Christine Saluzzo*



isosorbide

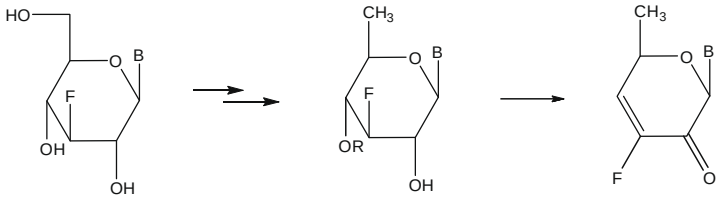
d : 82% inhibition towards *N*-acetylglucosaminidase

Regular Articles

Synthesis of 4,6-dideoxy-3-fluoro-2-keto-β-D-glucopyranosyl analogues of 5-fluorouracil, N^6-benzoyl adenine, uracil, thymine, N^4-benzoyl cytosine and evaluation of their antitumor activities **pp 48–55**

Stella Manta, Evangelia Tsoukala, Niki Tzioumaki, Christos Kiritsis, Jan Balzarini and Dimitri Komiotis*

The synthesis of the unsaturated 4,6-dideoxy-3-fluoro-2-keto-β-D-glucopyranosyl nucleosides of 5-fluorouracil (**6a**), N^6-benzoyl adenine (**6b**), uracil (**6c**), thymine (**6d**) and N^4-benzoyl cytosine (**6e**), is described. The newly synthesized 2′-ketopyranosyl derivatives were not potent antivirals at subtoxic concentrations. The 5-fluorouracil derivative **6a** was more cytostatic (50% inhibitory concentration ranging between 0.2 and 12 μM) than the other compounds.

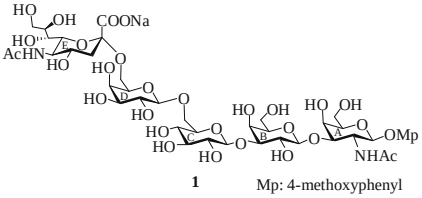


1a,b,c,d,e **5a,b R = Ac 9c,d,e R = Bz** **6a,b,c,d,e**

B = **a:** 5-Fluorouracil, **b:** N^6-Benzoyl adenine, **c:** Uracil, **d:** Thymine, **e:** N^4-Benzoyl cytosine

Concise synthesis of the pentasaccharide *O*-antigen corresponding to the Shiga toxin producing *Escherichia coli* O171 **pp 56–61**

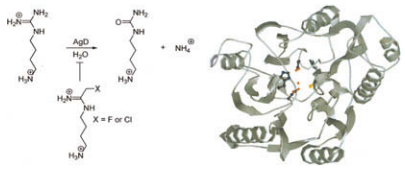
Pintu Kumar Mandal and Anup Kumar Misra*



1 Mp: 4-methoxyphenyl

Characterization and inactivation of an agmatine deiminase from *Helicobacter pylori* **pp 62–73**

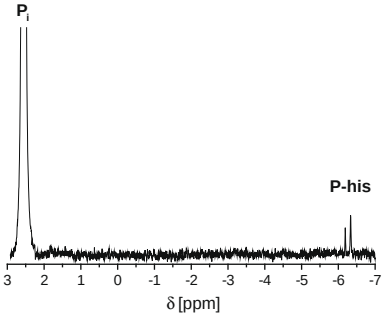
Justin E. Jones, Corey P. Causey, Leslie Lovelace, Bryan Knuckley, Heather Flick, Lukasz Lebioda and Paul R. Thompson*



Thiophosphorylation of free amino acids and enzyme protein by thiophosphoramidate ions **pp 74–80**

Tomasz Ruman,* Karolina Długopolska, Agata Jurkiewicz, Dagmara Rut, Tomasz Frączyk, Joanna Cieśla, Andrzej Leś, Zbigniew Szewczuk and Wojciech Rode

In search of an activity-preserving protein thiophosphorylation method, with thymidylate synthase recombinant protein used as a substrate, potassium thiophosphoramidate and diammonium thiophosphoramidate salts in Tris- and ammonium carbonate based buffer solutions were employed, proving to serve as a non-destructive environment. Using potassium phosphoramidate or diammonium thiophosphoramidate, a series of phosphorylated and thiophosphorylated amino acid derivatives was prepared, helping, together with computational (using density functional theory, DFT) estimation of ^{31}P NMR chemical shifts, to assign thiophosphorylated protein NMR resonances and prove the presence of thiophosphorylated lysine, serine and histidine moieties.



Cineole biodegradation: Molecular cloning, expression and characterisation of (1*R*)-6β-hydroxycineole dehydrogenase from *Citrobacter braakii* **pp 81–86**

Kate E. Slessor, Jeanette E. Stok, Sonia M. Cavaignac, David B. Hawkes, Younes Ghasemi and James J. De Voss*

An NAD(H)-dependent dehydrogenase, (1*R*)-6β-hydroxycineole dehydrogenase (CinD) was found to catalyse the regio- and enantiospecific interconversion of (1*R*)-6β-hydroxycineole and (1*R*)-6-ketocineole.