



Carbohydrate Research 317 (1999) 231-234

Subject Index of Volume 317

Ab initio structure solution

Molecular, crystal and solution structure of a β -cyclodextrin complex with the bromide salt of 2-(3-dimethylaminopropyl)-tricyclo[3.3.1.1^{3,7}]decan-2-ol, a potent antimicrobial drug 19

Alginate

Conformational and configurational features of acidic polysaccharides and their interactions with calcium ions: a molecular modeling investigation 119

Allyl fucoside

An abnormal deallylation reaction of an L-fucopyranoside 191 Amylopectin

The structure of cationic amylopectin as determined via mobility data compared to model calculations 223

Antimicrobial drug

Molecular, crystal and solution structure of a β -cyclodextrin complex with the bromide salt of 2-(3-dimethylaminopropyl)-tricyclo[3.3.1.1^{3,7}]decan-2-ol, a potent antimicrobial drug 19

Antithrombin

Assessment through chemical synthesis of the size of the heparin sequence involved in thrombin inhibition 85

Identification of a hexasaccharide sequence able to inhibit thrombin and suitable for 'polymerisation' 63

Anydro sugar

Convenient synthesis of 2,3-O-isopropylidene-5-thio-D-ribose and 5-thio-D-ribose; synthesis of 1,4-anhydro-2,3-O-isopropylidene- α -D-ribopyranose and 1,4-anhydro-2,3-O-isopropylidene-5-thio- α -D-ribopyranose 204

Bradyrhizobium aspalati

Structural characterisation of lipo-chitin oligosaccharides isolated from *Bradyrhizobium aspalati*, microsymbionts of commercially important South African legumes 155

Bromine oxidation

Evidence for cyclodextrin dioxiranes. Part 2. Catalytic and enantioselective properties of cyclodextrin dioxiranes formed from keto-derivatised hydroxypropyl-cyclodextrins 10

Bromoindolyl

Synthesis of bromoindolyl 4,7-di-O-methyl-Neu5Ac: specificity toward influenza A and B viruses 198

Carbamate

Synthesis of *Pseudomonas aeruginosa* lipopolysaccharide core antigens containing 7-*O*-carbamoyl-L-*glycero*-α-D-*manno*-heptopyranosyl residues 39

Carcinoembryonic antigen

Synthesis of a sialyl- α -(2 \rightarrow 6)-lactosamine trisaccharide with a 5-amino-3-oxapentyl spacer group at C-1¹ 29

Cell walls

FTIR spectroscopy as a tool for the analysis of olive pulp cell-wall polysaccharide extracts 145

Chemoenzymatic synthesis

Chemoenzymatic synthesis of spacer-linked oligosaccharides for the preparation of neoglycoproteins 180

Chromogenic substrate

Synthesis of bromoindolyl 4,7-di-O-methyl-Neu5Ac: specificity toward influenza A and B viruses 198

Conformation

Conformational and configurational features of acidic polysaccharides and their interactions with calcium ions: a molecular modeling investigation 119

Cyclodextrin

Evidence for cyclodextrin dioxiranes. Part 2. Catalytic and enantioselective properties of cyclodextrin dioxiranes formed from keto-derivatised hydroxypropyl—cyclodextrins 10

β-Cyclodextrin

Molecular, crystal and solution structure of a β -cyclodextrin complex with the bromide salt of 2-(3-dimethylaminopropyl)-tricyclo[3.3.1.1^{3,7}]decan-2-ol, a potent antimicrobial drug 19

β-D-Arabinofuranoside

Synthesis of methyl β -D-arabinofuranoside 5-[1D (and L)-myo-inositol 1-phosphate], the capping motif of the lipoarabinomannan of $Mycobacterium\ smegmatis\ 110$

Deallylation

An abnormal deallylation reaction of an L-fucopyranoside 191 di-O-Methyl-Neu5Ac

Synthesis of bromoindolyl 4,7-di-O-methyl-Neu5Ac: specificity toward influenza A and B viruses 198

Diosgenyl 2,4-di-O- α -L-rhamnopyranosyl- β -D-glucopyranoside (dioscin)

Synthesis of three diosgenyl saponins: dioscin, polyphyllin D, and balanitin 7 53

Diosgenyl [β -D-xylopyranosyl-($1 \rightarrow 3$)- β -D-glucopyranosyl]-($1 \rightarrow 4$)-(α -L-rhamnopyranosyl)-($1 \rightarrow 2$)- β -D-glucopyranoside (balanitin 7)

Synthesis of three diosgenyl saponins: dioscin, polyphyllin D, and balanitin 7 53

Diosgenyl α -L-rhamnopyranosyl- $(1 \rightarrow 2)$ - $(\alpha$ -L-arabinofuranosyl)- $(1 \rightarrow 4)$ - β -D-glucopyranoside (polyphyllin D)

Synthesis of three diosgenyl saponins: dioscin, polyphyllin D, and balanitin $7\,53$

Dioxirane

Evidence for cyclodextrin dioxiranes. Part 2. Catalytic and enantioselective properties of cyclodextrin dioxiranes formed from keto-derivatised hydroxypropyl-cyclodextrins 10

Electrokinetic sonic amplitude

The structure of cationic amylopectin as determined via mobility data compared to model calculations 223

Endoglucanase

Endoglucanase V and a phosphatase from *Trichoderma viride* are able to act on modified exopolysaccharide from *Lactococcus lactis* subsp. *cremoris* B40 131

Ethambutol

Ethambutol-sugar hybrids as potential inhibitors of mycobacterial cell-wall biosynthesis 164

Exopolysaccharide

Endoglucanase V and a phosphatase from *Trichoderma viride* are able to act on modified exopolysaccharide from *Lactococcus lactis* subsp. *cremoris* B40 131

Factor Xa

Assessment through chemical synthesis of the size of the heparin sequence involved in thrombin inhibition 85

Identification of a hexasaccharide sequence able to inhibit thrombin and suitable for 'polymerisation' 63

FTIR spectroscopy

FTIR spectroscopy as a tool for the analysis of olive pulp cell-wall polysaccharide extracts 145

Furanose-pyranose equilibria

Convenient synthesis of 2,3-O-isopropylidene-5-thio-D-ribose and 5-thio-D-ribose; synthesis of 1,4-anhydro-2,3-O-isopropylidene- α -D-ribopyranose and 1,4-anhydro-2,3-O-isopropylidene-5-thio- α -D-ribopyranose 204

β-Galactosidase

Chemoenzymatic synthesis of spacer-linked oligosaccharides for the preparation of neoglycoproteins 180

Glucopyranoside

Inhibition of some hepatic lysosomal glycosidases by ethanolamines and phenyl 6-deoxy-6-(morpholin-4-yl)- β -D-glucopyranoside 100

α-Glucosidase

Inhibition of some hepatic lysosomal glycosidases by ethanolamines and phenyl 6-deoxy-6-(morpholin-4-yl)- β -D-glucopyranoside $100\,$

β-Glucosidase

Inhibition of some hepatic lysosomal glycosidases by ethanolamines and phenyl 6-deoxy-6-(morpholin-4-yl)- β -D-glucopyranoside 100

Glucuronan

Conformational and configurational features of acidic polysaccharides and their interactions with calcium ions: a molecular modeling investigation 119

β -Glucuronidase

Inhibition of some hepatic lysosomal glycosidases by ethanolamines and phenyl 6-deoxy-6-(morpholin-4-yl)- β -D-glucopyranoside 100

Glucuronoxylans

FTIR spectroscopy as a tool for the analysis of olive pulp cell-wall polysaccharide extracts 145

Glycosyl fluorides

Stereospecific α-D-mannosylation 210

Glycosyltransferases

Ethambutol-sugar hybrids as potential inhibitors of mycobacterial cell-wall biosynthesis 164

Hemicelluloses

FTIR spectroscopy as a tool for the analysis of olive pulp cell-wall polysaccharide extracts 145

Heparin

Assessment through chemical synthesis of the size of the heparin sequence involved in thrombin inhibition 85

Identification of a hexasaccharide sequence able to inhibit thrombin and suitable for 'polymerisation' 63

Heparin mimetics

Assessment through chemical synthesis of the size of the heparin sequence involved in thrombin inhibition 85

Identification of a hexasaccharide sequence able to inhibit thrombin and suitable for 'polymerisation' 63

Heptos

Synthesis of *Pseudomonas aeruginosa* lipopolysaccharide core antigens containing 7-*O*-carbamoyl-L-*glycero*-α-D-*manno*-heptopyranosyl residues 39

Hydroxypropyl-cyclodextrin

Evidence for cyclodextrin dioxiranes. Part 2. Catalytic and enantioselective properties of cyclodextrin dioxiranes formed from keto-derivatised hydroxypropyl—cyclodextrins 10

Influenza

Synthesis of bromoindolyl 4,7-di-O-methyl-Neu5Ac: specificity toward influenza A and B viruses 198

Inhibitors

Inhibition of some hepatic lysosomal glycosidases by ethanolamines and phenyl 6-deoxy-6-(morpholin-4-yl)- β -D-glucopyranoside 100

Ketoaldonic acids

Synthesis of uronic acid derivatives from 1,2;3,4-di-*O*-isopropylidene-α-D-*galacto*-hexodialdopyranose and aldulosonic acid derivatives from 2,3;4,5-di-*O*-isopropylidene-β-D-*arabino*-hexos-2-ulopyranose 217

Ketone

Evidence for cyclodextrin dioxiranes. Part 2. Catalytic and enantioselective properties of cyclodextrin dioxiranes formed from keto-derivatised hydroxypropyl—cyclodextrins 10

Lactococcus lactis subsp. cremoris

Endoglucanase V and a phosphatase from *Trichoderma viride* are able to act on modified exopolysaccharide from *Lactococcus lactis* subsp. *cremoris* B40 131

Legumes

Structural characterisation of lipo-chitin oligosaccharides isolated from *Bradyrhizobium aspalati*, microsymbionts of commercially important South African legumes 155

Lipoarabinomannan

Synthesis of methyl β -D-arabinofuranoside 5-[1D (and L)-myo-inositol 1-phosphate], the capping motif of the lipoarabinomannan of $Mycobacterium\ smegmatis\ 110$

Lipo-chitin oligosaccharides

Structural characterisation of lipo-chitin oligosaccharides isolated from *Bradyrhizobium aspalati*, microsymbionts of commercially important South African legumes 155

Lipochitooligosaccharide

Carbohydrate determinants of *Rhizobium*-legume symbioses 1 Lipopolysaccharide

Carbohydrate determinants of *Rhizobium*—legume symbioses 1 Synthesis of *Pseudomonas aeruginosa* lipopolysaccharide core antigens containing 7-*O*-carbamoyl-L-*glycero*-α-D-*manno*-heptopyranosyl residues 39

Mannosylation

Stereospecific α-D-mannosylation 210

Mass spectrometry

Structural characterisation of lipo-chitin oligosaccharides isolated from *Bradyrhizobium aspalati*, microsymbionts of commercially important South African legumes 155

Methanesulfonate esters

Convenient synthesis of 2,3-O-isopropylidene-5-thio-D-ribose and 5-thio-D-ribose; synthesis of 1,4-anhydro-2,3-O-isopropylidene- α -D-ribopyranose and 1,4-anhydro-2,3-O-isopropylidene-5-thio- α -D-ribopyranose 204

MM3

Conformational and configurational features of acidic polysaccharides and their interactions with calcium ions: a molecular modeling investigation 119

Mobility

The structure of cationic amylopectin as determined via mobility data compared to model calculations 223

Mode of action

Endoglucanase V and a phosphatase from *Trichoderma viride* are able to act on modified exopolysaccharide from *Lactococcus lactis* subsp. *cremoris* B40 131

Molecular mechanics

Conformational and configurational features of acidic polysaccharides and their interactions with calcium ions: a molecular modeling investigation 119

Morpholine

Inhibition of some hepatic lysosomal glycosidases by ethanolamines and phenyl 6-deoxy-6-(morpholin-4-yl)- β -D-glucopyranoside 100

Mycobacterium smegmatis

Synthesis of methyl β -D-arabinofuranoside 5-[1D (and L)-myo-inositol 1-phosphate], the capping motif of the lipoarabinomannan of *Mycobacterium smegmatis* 110

Neoglycoprotein

Synthesis of *Pseudomonas aeruginosa* lipopolysaccharide core antigens containing 7-*O*-carbamoyl-L-*glycero*-α-D-*manno*-heptopyranosyl residues 39

Neoglycoproteins

Chemoenzymatic synthesis of spacer-linked oligosaccharides for the preparation of neoglycoproteins 180

NMR

Molecular, crystal and solution structure of a β -cyclodextrin complex with the bromide salt of 2-(3-dimethylaminopropyl)-tricyclo[3.3.1.1³,7]decan-2-ol, a potent antimicrobial drug 19

Nod-factors

Carbohydrate determinants of Rhizobium-legume symbioses 1

Oligonucleotides

Synthesis of 1-(5-amino-3,5-dideoxy-3-methoxycarbonylmethyl- β -D-ribofuranosyl)thymine 193

Olive pulp

FTIR spectroscopy as a tool for the analysis of olive pulp cell-wall polysaccharide extracts 145

PCA

FTIR spectroscopy as a tool for the analysis of olive pulp cell-wall polysaccharide extracts 145

Pectic polysaccharides

FTIR spectroscopy as a tool for the analysis of olive pulp cell-wall polysaccharide extracts 145

Pectin

Conformational and configurational features of acidic polysaccharides and their interactions with calcium ions: a molecular modeling investigation 119

Phosphatase

Endoglucanase V and a phosphatase from *Trichoderma viride* are able to act on modified exopolysaccharide from *Lactococcus lactis* subsp. *cremoris* B40 131

Pseudomonas aeruginosa

Synthesis of *Pseudomonas aeruginosa* lipopolysaccharide core antigens containing 7-*O*-carbamoyl-L-*glycero*-α-D-*manno*-heptopyranosyl residues 39

Rhizobia

Structural characterisation of lipo-chitin oligosaccharides isolated from *Bradyrhizobium aspalati*, microsymbionts of commercially important South African legumes 155

Rhizobium

Carbohydrate determinants of *Rhizobium*-legume symbioses 1 Rooibos tea

Structural characterisation of lipo-chitin oligosaccharides isolated from *Bradyrhizobium aspalati*, microsymbionts of commercially important South African legumes 155

Saponin

Synthesis of three diosgenyl saponins: dioscin, polyphyllin D, and balanitin 7 53

Selective glycosylation

Synthesis of a sialyl- α -(2 \rightarrow 6)-lactosamine trisaccharide with a 5-amino-3-oxapentyl spacer group at C-1 ¹ 29

Sialidase

Synthesis of bromoindolyl 4,7-di-O-methyl-Neu5Ac: specificity toward influenza A and B viruses 198

Sialyllactosamine

Synthesis of a sialyl- α -(2 \rightarrow 6)-lactosamine trisaccharide with a 5-amino-3-oxapentyl spacer group at C-1 $^{\rm I}$ 29

$\alpha(2 \rightarrow 3)$ -Sialyltransferase

Chemoenzymatic synthesis of spacer-linked oligosaccharides for the preparation of neoglycoproteins 180

Static light scattering

The structure of cationic amylopectin as determined via mobility data compared to model calculations 223

Stereoselective synthesis

Synthesis of 1-(5-amino-3,5-dideoxy-3-methoxycarbonylmethyl- β -D-ribofuranosyl)thymine 193

Stereospecific

Stereospecific α-D-mannosylation 210

Sugar phosphates

Synthesis of methyl β -D-arabinofuranoside 5-[1D (and L)-myo-inositol 1-phosphate], the capping motif of the lipoarabinomannan of Mycobacterium smegmatis 110

Symbiosis

Carbohydrate determinants of *Rhizobium*-legume symbioses 1 Synchrotron radiation

Molecular, crystal and solution structure of a β -cyclodextrin complex with the bromide salt of 2-(3-dimethylaminopropyl)-tricyclo[3.3.1.1^{3,7}]decan-2-ol, a potent antimicrobial drug 19

Synthesis

Synthesis of three diosgenyl saponins: dioscin, polyphyllin D, and balanitin 7 53

5-Thio-D-ribose derivatives

Convenient synthesis of 2,3-O-isopropylidene-5-thio-D-ribose and 5-thio-D-ribose; synthesis of 1,4-anhydro-2,3-O-isopropylidene- α -D-ribopyranose and 1,4-anhydro-2,3-O-isopropylidene-5-thio- α -D-ribopyranose 204

Thio sugars

Convenient synthesis of 2,3-O-isopropylidene-5-thio-D-ribose and 5-thio-D-ribose; synthesis of 1,4-anhydro-2,3-O-isopropylidene- α -D-ribopyranose and 1,4-anhydro-2,3-O-isopropylidene-5-thio- α -D-ribopyranose 204

Thrombin

Assessment through chemical synthesis of the size of the heparin sequence involved in thrombin inhibition 85

Identification of a hexasaccharide sequence able to inhibit thrombin and suitable for 'polymerisation' 63

Thymidine analogue

Synthesis of 1-(5-amino-3,5-dideoxy-3-methoxycarbonylmethyl- β -D-ribofuranosyl)thymine 193

Transglycosylation

Chemoenzymatic synthesis of spacer-linked oligosaccharides for the preparation of neoglycoproteins 180

Trichloroacetimidates

Synthesis of a sialyl- α -(2 \rightarrow 6)-lactosamine trisaccharide with a 5-amino-3-oxapentyl spacer group at C-1 $^{\rm I}$ 29

Trichoderma viride

Endoglucanase V and a phosphatase from *Trichoderma viride* are able to act on modified exopolysaccharide from *Lactococcus lactis* subsp. *cremoris* B40 131

Tuberculosis

Ethambutol-sugar hybrids as potential inhibitors of mycobacterial cell-wall biosynthesis 164

Uronic acids

Conformational and configurational features of acidic polysaccha-

rides and their interactions with calcium ions: a molecular modeling investigation 119

Synthesis of uronic acid derivatives from 1,2;3,4-di-*O*-isopropylidene-α-D-*galacto*-hexodialdopyranose and aldulosonic acid derivatives from 2,3;4,5-di-*O*-isopropylidene-β-D-*arabino*-hexos-2-ulopyranose 217

Wacker-Hoechst reaction

An abnormal deallylation reaction of an L-fucopyranoside 191

X-ray crystallography

Molecular, crystal and solution structure of a β -cyclodextrin complex with the bromide salt of 2-(3-dimethylaminopropyl)tricyclo-[3.3.1.1^{3,7}]decan-2-ol, a potent antimicrobial drug 19

Xylose

FTIR spectroscopy as a tool for the analysis of olive pulp cell-wall polysaccharide extracts 145