## SUBJECT INDEX

- Absidia cylindrospora, characterisation of fucomannopeptide and mannoprotein from, 113
- Acetals and thioacetals from thiodiglycolaldehyde: some oxidation products, 195
- 4-O-(2-Acetamido-2-deoxy-β-D-glucopyranosyl)-D-ribitol, synthesis of, 153
- 2-Acetamido-2- deoxy-α-D- galactopyranosyl groups, isolation from tumoral mucins of oligosaccharides containing, 89
- 5-Acetamido-3,5-dideoxy-α-D-glycero-D-galacto-2-nonulopyranosidonic acid, reinvestigation of the synthesis of 4-methylcoumarin-7-yl, 11
- Affinity labelling of  $\beta$ -D-galactosidase from *Escherichia coli* with o-nitrophenyl  $\beta$ -D- $\{6^{-3}H\}$ galactopyranoside, C21
- Aggregation pheromone component (-)-multistriatin, a route from p-galactose to the, 159
- ω-Aldehydo 1-thioglycosides of methyl Dgalactopyranuronate and related compounds, 333
- Aldosyl phosphates, an approach to the synthesis of, *via* aldosyl phosphites, C1
- Aldosyl phosphites, an approach to the synthesis of aldosyl phosphates via, C1
- Alginates, interactions of univalent cations with,
- Amino sugars, synthesis of nitrogen-15-labeled derivatives of, by addition of phthalimide-<sup>15</sup>N to a carbohydrate epoxide, 43
- 3-Amino-2,3,6-trideoxy-3-C-methyl-L-lyxo-hexose (L-vancosamine) and its D enantiomer, an approach to, via the cyanohydrin route, 207
- A mouse submandibular sialomucin containing both N- and O-glycosylic linkages, 305
- Amylase, production by fungal pathogens of, 176 Amylopectins, use of cyclodextrin glycosyltransferase for investigation of the fine structure of, 245
- Amylose, behavior of, towards anhydrous hydrogen fluoride, 217
- A new, extracellular oligosaccharide, kojihexaose, from *Rhizobium japonicum* strain 561, 170
- 1,5-Anhydro-p-hexitols, a convenient preparation of some 2,3,4,6-tetra-O-acetyl-, 330
- 2,5-Anhydro-3,4,6-tri-*O*-benzoyl-D-allonic acid, coupling-elimination reactions of, C5
- Antibody, monoclonal, to lacto-N-biose I, 345

- Anti-inflammatory activity and conformational behavior of a branched  $(1\rightarrow 3)$ - $\beta$ -D-glucan from an alkaline extract of *Dictyophora indusiata* Fisch., 77
- Approach to the synthesis of aldosyl phosphates via aldosyl phosphites, C1
- Blood-group A determinants, incompatible, in tumoral mucins, isolation of oligosaccharides from, 89
- Branched-chain amino sugars via the cyanohydrin route, an approach to, 207
- Capsular and extracellular polysaccharides from Rhizobium microsymbionts of Acacia decurrens, 267
- Carbohydrate-containing polysaccharide copolymers with the specificity of O:3 and O:4 factors of Salmonella, synthesis of, C16
- Cellulase from *Penicillium funiculosum*, purification and some properties of a  $(1\rightarrow 4)$ - $\beta$ -D-glucan glucohydrolase associated with the, 291
- Cellulose, behavior of, towards anhydrous hydrogen fluoride, 217
- Characterisation of fucomannopeptide and mannoprotein from Absidia cylindrospora, 113
- Contact zones for heparan sulphate self-association, structural features of the, 127
- Convenient preparation of some 2,3,4,6-tetra-O-acetyl-1,5-anhydro-p-hexitols, 330
- Coupling-elimination reactions of 2,5-anhydro-3,4,6-tri-*O*-benzoyl-D-allonic acid: synthesis of 2'-deoxyribo-C-nucleosides, C5
- Cyclodextrin glycosyltransferase, investigation of the fine structure of amylopectins by use of, 245
- Dehydro-L-ascorbic acid, conversion of 2-arylhydrazone 3-oximes into substituted triazoles and isoxazolines, 229
- Dehydroascorbic acid osazone and related tetronic acid derivatives, a theoretical study of tautomerism in, 1
- 3-Deoxy-D-erythro-pentose, synthesis of, 326
- D-erythro-, 3-Deoxy-pentose, synthesis of, 326
- Deoxy sugars, 2- and 3-, a high-yielding route to, by desulfonyloxylation of secondary p-toluenesulfonates of glycosides with lithium triethylborohydride, 19

C28 SUBJECT INDEX

- Desulfonyloxylations of some secondary ptoluenesulfonates of glycosides by lithium triethylborohydride; a high-yielding route to 2- and 3-deoxy sugars, 19
- Disaccharides, synthesis of three, for the preparation of immunogens bearing immunodeterminants known to occur on glycoproteins, 55
- E. coli fimbriae, synthesis of di- and tri-saccharides corresponding to receptor structures recognised by pyelonephritogenic, 261
- Fine structure of amylopectins, use of cyclodextrin glycosyltransferase for investigation of the, 245
- Fucomannopeptide and mannoprotein from Absidia cylindrospora, characterisation of, 113 Fungal pathogens, production of amylase and hemicellulase of, 176
- $\beta$ -D-[6-3H]Galactopyranoside, o-nitrophenyl, affinity labelling of  $\beta$ -D-galactosidase from *Escherichia coli* with, C21
- O-β-D-Galactopyranosyl-(1→3)-O-(2-acetamido-2-deoxy-α-D-galactopyranosyl)-L-serine and -L-threonine, synthesis of derivatives of, C9
- D-Galactopyranuronate, methyl,  $\omega$ -aldehydo 1-thioglycosides of, and related compounds, 333
- $\beta$ -D-Galactosidase, from *Escherichia coli*, affinity labelling of, with *o*-nitrophenyl  $\beta$ -D-[6- $^3$ H]-galactopyranoside, C21
- Galactosidase from *Escherichia coli* with [ $^{14}$ C]-glycerol, mediated through covalently bound 2,6-anhydro-1-deoxy-D-*galacto*-hept-1-enitol, radioaffinity labelling of  $\beta$ -D-, 181
- α-D-Glucan, extracellular, of *Leuconostoc mesenteroides* NRRL B-1355, synthesis of the repeating unit of, C12
- (1→4)-β-D-Glucan glucohydrolase associated with the cellulase from Penicillium funiculosum, purification and some properties of a, 291
- (1→3)-β-D-Glucan, a branched, from an alkaline extract of *Dictyophora indusiata* Fisch., antiinflammatory activity and conformational behavior of, 77
- D-Glucoheptaose, a branched, synthesis of, C12
  D-Glucose, a stereospecific route to (-)-cis-rose oxide from, 165
- Glycopeptide, complex-type, binding to lentiland pea-lectin of, 283
- Hemicellulase, production by fungal pathogens of, 176
- Heparan sulphate self-association, structural features of the contact zones for, 127
- Heparan sulphate, structural requirements for self association of, 135
- Immunoadjuvant peptidoglycan monomer and related compounds, <sup>13</sup>C-n.m.r. studies of a natural, 320

Interactions of alginates with univalent cations, 101

- Kojihexaose, a new extracellular oligosaccharide, from *Rhizobium japonicum* strain 561, 170
- Labelling of β-D-galactosidase from Escherichia coli with [14C]-glycerol, mediated through covalently bound 2,6-anhydro-1-deoxy-D-galacto-hept-1-enitol, radioaffinity, 181
- Lacto-N-biose I, monoclonal antibody to, 345 Lectins, lentil- and pea-, binding of complextype glycopeptide to, 283
- Lentil-lectin, binding of complex-type glycopeptides to, 283
- Lipopolysaccharide, of *Shigella boydii* type 8, structural studies on a carbohydrate chain isolated from the, 69
- α-L-Lyxofuranose, 1,2,3-tri-O-acetyl-4,5-dideoxy-4-C-[(R)-phenylphosphinyl]-, X-ray crystal and molecular structure of, 187
- 4-Methylcoumarin-7-yl 5-acetamido-3,5-dideoxy-α-D-glycero-D-galacto-2-nonulopyranosidonic acid, reinvestigation of the synthesis of, 11
   Monoclonal antibodies to lacto-N-biose I, 345
   Mucin, tumoral, isolation of oligosaccharides
- Mucin, tumoral, isolation of oligosaccharides from incompatible blood-group A determinants in, 89
- (-)-Multistriatin, a route from D-galactose to the aggregation pheromone component. 159
- N.m.r. spectra, <sup>1</sup>H- and <sup>13</sup>C-, of group A-variant streptococcal polysaccharide, 315
- <sup>13</sup>C-N.m.r. studies of a natural, immunoadjuvant, peptidoglycan monomer and related compounds, 320
- Oligosaccharide, a new extracellular, kojihexaose, from *Rhizobium japonicum*, strain 561, 170
- Oxidation products of acetals and thioacetals from thiodiglycolaldehyde, some, 195
- Partial sulfonylation of methyl  $\alpha$  and  $\beta$ -D-xylopyranoside, 339
- Pea-lectin, binding of complex-type glycopeptides to, 283
- Pentofuranose, having phosphorus in the hemiacetal ring, the first X-ray analysis of a, 187
- Pentose, 3-deoxy-D-erythro-, synthesis of, 326 Peptidoglycan monomer and related compounds, <sup>13</sup>C-n.m.r. studies of a natural immunoadjuvant, 320
- Polysaccharide copolymers with the specificity of O:3 and O:4 factors of Salmonella, synthesis of carbohydrate-containing, C16 Polysaccharide, group A-variant, streptococcal

<sup>1</sup>H- and <sup>13</sup>C-n.m.r. spectra of, 315

SUBJECT INDEX C29

- Polysaccharide, obtained from the cambium layer of a bael (*Aegle marmelos*) tree, structural studies on a, 145
- Polysaccharides, capsular, and extracellular, from *Rhizobium* microsymbionts of *Acacia decurrens*, 267
- Polysaccharides, of the brown seaweed *Turbinaria* murrayana, 277
- Purification and some properties of a  $(1\rightarrow 4)$ - $\beta$ -D-glucan glucohydrolase associated with the cellulase from *Penicillium funiculosum*, 291
- Radioaffinity labelling of  $\beta$ -D-galactosidase from *Escherichia coli* with [<sup>14</sup>C]-glycerol, mediated through covalently bound 2,6-anhydro-1-deoxy-D-galacto-hept-1-enitol, 181
- X-Ray crystal, and molecular, structure of 1,2,3-tri-O-acetyl-4,5-dideoxy-4-C-[(R)-phenylphosphinyl]-α-L-lyxofuranose: the first X-ray analysis of a pentofuranose having phosphorus in the hemiacetal ring, 187
- Receptor structures recognised by pyelonephritogenic *E. coli* fimbriae, synthesis of diand tri-saccharides corresponding to, 261
- Reinvestigation of the synthesis of 4-methylcoumarin-7-yl 5-acetamido-3,5-dideoxy-α-Dglycero-D-galacto-2-nonulopyranosidonic acid, a fluorogenic substrate for neuraminidase, 11
- D-Ribitol, 4-O-(2-acetamido-2-deoxy-β-D-glucopyranosyl)-, synthesis of, 153
- (-)-cis-Rose oxide, a stereospecific route from D-glucose to, 165
- Route from D-galactose to the aggregation pheromone component (—)-multistriatin, a, 159
- Seaweed, brown (*Turbinaria murrayana*), the polysaccharides of, 277
- Self association of heparan sulphate, structural requirements for, 135
- L-Serine and L-threonine, synthesis of derivatives of  $O-\beta$ -D-galactopyranosyl- $(1\rightarrow 3)$ -O-(2-acetamido-2-deoxy- $\alpha$ -D-galactopyranosyl)-, C9
- Sialomucin, a mouse submandibular, containing both N- and O-glycosylic linkages, 305
- Staphylococcus aureus, synthesis of the antigenic determinant of, 153
- Stereospecific route to (-)-(2R,4R)-4-methyl-2-(2-methyl-1-propenyl)tetrahydropyran [(-)cis-rose oxide] from D-glucose, a, 165
- Streptoccal polysaccharide, group A-variant, <sup>1</sup>H- and <sup>13</sup>C-n.m.r. spectra of, 315
- Structural features of the contact zones for heparan sulphate self-association, 127
- Structural requirements for heparan sulphate self-association, 135
- Structural studies on a carbohydrate chain isolated from the lipopolysaccharide of Shigella boydii type 8, 69

Structural studies on a polysaccharide obtained from the cambium layer of a bael (Aegle marmelos) tree, 145

- Studies on dehydro-L-ascorbic acid 2-arylhydrazone 3-oximes: conversion into substituted triazoles and isoxazolines, 229
- Synthesis of di- and tri-saccharides corresponding to receptor structures recognised by pyelonephritogenic *E. coli* fimbriae, 261
- Synthesis of a branched D-glucoheptaose: the repeating unit of extracellular α-D-glucan 1355-S of *Leuconostoc mesenteroides* NRRL B-1355, C12
- Synthesis of carbohydrate-containing polysaccharide copolymers with the specificity of O:3 and O:4 factors of Salmonella, C16
- Synthesis of 2'-deoxyribo-C-nucleosides, C5
- Synthesis of derivatives of  $O-\beta$ -D-galactopyranosyl-(1 $\rightarrow$ 3)-O-(2-acetamido-2-deoxy- $\alpha$ -D-galactopyranosyl)-L-serine and -L-threonine, C9
- Synthesis of nitrogen-15-labeled amino sugar derivatives by addition of phthalimide-15 N to a carbohydrate epoxide, 43
- Synthesis of three disaccharides for the preparation of immunogens bearing immunodeterminants known to occur on glycoproteins, 55
- Tautomerism in dehydroascorbic acid osazone and related tetronic acid derivatives, a theoretical study of, 1
- 2,3,4,6-Tetra-O-acetyl-1,5-anhydro-D-hexitols, a convenient preparation of some, 330
- The behavior of cellulose, amylose, and  $\beta$ -D-xylan towards anhydrous hydrogen fluoride, 217
- Theoretical study of tautomerism in dehydroascorbic acid osazone and related tetronic acid derivatives, 1
- The polysaccharides of the brown seaweed Turbinaria murrayana, 277
- Thiodiglycolaldehyde, some oxidation products of acetals and thioacetals of, 195
- p-Toluenesulfonates, secondary, of glycosides, desulfonyloxylations of, by lithium triethylborohydride, 19
- Univalent cations, interactions of alginates with, 101
- L-Vancosamine(3-amino-2,3,6-trideoxy-3- C-methyl-L-lyxo-hexose) and its D enantiomer, an approach to, via the cyanohydrin route, 207
- $\beta$ -D-Xylan, behavior of, towards anhydrous hydrogen fluoride, 217
- D-Xylopyranoside, methyl  $\alpha$ -, and  $\beta$ -, partial sulfonylation of, 339