

Bibliography of carbohydrate polymers

(6 weeks journals. Search completed at 16th. Apr. 2003)

1. Books, reviews & symposia

- Broadbent JR, McMahon DJ, Welker DL, Oberg CJ, Moineau S// Utah State Univ, Dept Nutr & Food Sci, Western Dairy Ctr, Logan, Ut 84322, USA
J Dairy Sci 2003 **86** (2) 407
- Biochemistry, genetics, and applications of exopolysaccharide production in *Streptococcus thermophilus*: A review
- French N// Univ Liverpool, Liverpool Sch Trop Med, Pembroke Pl, Liverpool L3 5QA, England
J Infect 2003 **46** (2) 78
- Use of pneumococcal polysaccharide vaccines: No simple answers (Review)
- Hoppensteadt D, Walenga JM, Fareed J, Bick RL// Loyola Univ Med Ctr, Dept Pathol & Pharmacol, Hemostasis & Thrombosis Res Lab, 2160 Sth 1st Ave, Maywood, IL 60153, USA
Hematol Oncol Clin North Am 2003 **17** (1) 313
- Heparin, low-molecular-weight heparins, and heparin pentasaccharide: Basic and clinical differentiation
- Khor E// Natl Univ Singapore, Dept Chem, 3 Sci Dr, SG-117543 Singapore, Rep Singapore
Curr Opin Solid State Mater Sci 2002 **6** (4) 313
- Chitin: A biomaterial in waiting
- Schmitt U, Branch SK, Holzgrabe U// *Univ Wurzburg, Inst Pharm & Food Chem, DE-97074 Wurzburg, Germany
J Sep Sci 2002 **25** (15-17) 959
- Chiral separations by cyclodextrin-modified capillary electrophoresis: Determination of the enantiomeric excess (Review)
- Tharanathan RN, Kittur FS// Cent Food Technol Res Inst, Dept Biochem & Nutr, IN-570013 Mysore, India
Crit Rev Food Sci Nutr 2003 **43** (1) 61
- Chitin: The undisputed biomolecule of great potential

2. Cellulose

- Biganska O, Navard P// *Ecole Mines Paris, UMR CNRS 7635, Ctr Mise Forme Mat, CEMEF, BP 207, FR-06094 Sophia Antipolis, France
Polymer 2003 **44** (4) 1035
- Phase diagram of a cellulose solvent: *N*-Methylmorpholine-*N*-oxide-water mixtures
- Boraston AB, Kwan E, Chiu P, Warren RAJ, Kilburn DG// Univ Victoria, Dept Biochem & Microbiol, POB 3055 STN CSC, Victoria, Brit Columbia, Canada V8W 3P6
J Biol Chem 2003 **278** (8) 6120
- Recognition and hydrolysis of noncrystalline cellulose
- Dufresne A, Dupeyre D, Paillet M// Univ Grenoble I, CERMAV-CNRS, BP 53, FR-38041 Grenoble 9, France
J Appl Polym Sci 2003 **87** (8) 1302
- Lignocellulosic flour-reinforced poly(hydroxybutyrate-co-valerate) composites
- Gupta R, Mukherjee B// *Jadavpur Univ, Dept Pharmaceut Chem, IN-700032 Calcutta, India
Drug Dev Ind Pharm 2003 **29** (1) 1
- Development and *in vitro* evaluation of diltiazem hydrochloride transdermal patches based on povidone-ethylcellulose matrices
- Gustafsson C, Nystrom C, Lennholm H, Bonferoni MC, Caramella CM// *Uppsala Univ, Dept Pharm, Box 580, SE-75123 Uppsala, Sweden
J Pharm Sci 2003 **92** (3) 494

- Characteristics of hydroxypropyl methylcellulose influencing compactibility and prediction of particle and tablet properties by infrared spectroscopy
- Huang MR, Xu QW, Gu SY, Wu YH, Dong ZQ, Wang J, Shao HT, Wang XS// Tongji Univ, Coll Mat Sci & Engn, Dept Polymer Mat Sci & Engn, 1239 Siping Rd, CN-200092 Shanghai, Peoples Rep China
J Appl Polym Sci 2003 **87** (8) 1371
- Oxygen enrichment across blend membranes of bipyridine and ethyl cellulose
- Huang Y, Khanvilkar KH, Moore AD, Hilliard-Lott M// Abbott Labs, Dept R4P7, Bldg M3B-2, 1401 Sheridan Rd, Nth Chicago, IL 60064, USA
Drug Dev Ind Pharm 2003 **29** (1) 79
- Effects of manufacturing process variables on *in vitro* dissolution characteristics of extended-release tablets formulated with hydroxypropyl methylcellulose
- Ito T, Hirata Y, Sawa F, Shirakawa N// Toyohashi Univ Technol, Dept Mech Engn, 1-1 Tempaku, Toyohashi, Aichi 441 8580, Japan
Jpn J Appl Phys Pt 1 2002 **41** (9) 5809
- Hydrogen bond and crystal deformation of cellulose in sub/super-critical water
- Koc Y, Alkan F, Erol M// Univ Selcuk, Coll Vet Med, Dept Surg, TR-42031 Kampus, Konya, Turkey
Rev Med Vet 2002 **153** (12) 803
- An experimental study evaluating the effect of sodium carboxymethylcellulose on the prevention of postoperative intraabdominal adhesions (French, English Abstract)
- Kulichikhin VG, Dreval VE, Shatalova AM, Golova LK, Bilibin AY// Russian Acad Sci, Topchiev Inst Petrochem Synth, Leninskii 29, RU-119991 Moscow, Russia
Polym Sci Ser A 2002 **44** (12) 1336
- Mutual solutions of cellulose and liquid-crystalline polymers in *N*-methylmorpholine-*N*-oxide: Phase transitions, rheology, and mechanical properties of extrudates
- Li L, Yang H, Cheng RS, Wang ZL// Nanjing Normal Univ, Coll Chem & Environm Sci, CN-210097 Nanjing, Peoples Rep China
Chem J Chinese Univ-Chinese 2002 **23** (12) 2378
- Influence of heating and freezing on the hydrodynamic properties of ethyl cellulose dilute solution (Chinese, English Abstract)
- Lima AMD, Wong JT, Paillet M, Borsali R*, Pecora R// *Bordeaux Univ, ENSCPB, UMR 5629 CNRS, LCPO, 16 Ave Pey Berland, FR-33607 Pessac, France
Langmuir 2003 **19** (1) 24
- Translational and rotational dynamics of rodlike cellulose whiskers
- Lima DU, Oliveira RC, Buckeridge MS// *Inst Bot, Secao Fisiol & Bioquim, Avda Miguel Stefano 3678 Agua Funda, BR-04301-902 Sao Paulo, Brazil
Carbohydr Polym 2003 **52** (4) 367
- Seed storage hemicelluloses as wet-end additives in papermaking
- Miller AF, Donald AM// UMIST, Dept Chem Engn, POB 88, Manchester M60 1QD, England
Langmuir 2002 **18** (26) 10155
- Surface and interfacial tension of cellulose suspensions
- Nowakowska M, Sterzel M, Szczubialka K, Guillet JE// Jagiellonian Univ, Fac Chem, Ingardena 3, PL-30060 Krakow, Poland
Macromol Rapid Commun 2002 **23** (16) 972
- Photoactive modified hydroxyethylcellulose
- Oncel M, Remzi FH*, Senagore AJ, Connor JT, Fazio VW// *Cleveland Clin Fdn, Dept Colorectal Surg, 9500 Euclid Ave, Cleveland, Oh 44195, USA
Dis Colon Rectum 2003 **46** (2) 187
- Comparison of a novel liquid (Adcon-P®) and a sodium hyaluronate and carboxymethylcellulose membrane (Septrafilm™) in postsurgical adhesion for-

As a service to subscribers of the journal, this bibliography contains newly published material in the field of carbohydrate polymers. The bibliography is divided into thirteen sections: 1 Books, reviews & symposia; 2 Cellulose; 3 Cellulose-degrading enzymes; 4 Chitin/Chitosan; 5 Cyclodextrins; 6 Lignin; 7 Lipopolysaccharides; 8 Pectin; 9 Starch; 10 Starch-degrading enzymes; 11 Polysaccharides - Microbial; 12 Polysaccharides - Plant; 13 Polysaccharides - Other. Within each section, articles are listed in alphabetical order with respect to author. When there are no publications to appear under one of these headings, that section will be omitted.

mation in a murine model

Pekny MR, Zartman J, Krantz WB*, Greenberg AR, Todd P// *Univ Cincinnati, Dept Chem Engr, Cincinnati, Oh 45221, USA

J Membr Sci 2003 **211** (1) 71

Flow-visualization during macrovoid pore formation in dry-cast cellulose acetate membranes

Potthast A, Rosenau T, Sartori J, Sixta H, Kosma P*// *Univ Agr Sci, Inst Chem, Christian Doppler Lab, Muthgasse 18, AU-1190 Vienna, Austria

Polymer 2003 **44** (1) 7

Hydrolytic processes and condensation reactions in the cellulose solvent system *N,N*-dimethylacetamide/lithium chloride. Part II: Degradation of cellulose

Qiu WL, Zhang FR, Endo T, Hirotsu T*// *Nat'l Inst Adv Ind Sci & Technol, 2217-14 Hayashi cho, Takamatsu, Kagawa 761 0395, Japan

J Appl Polym Sci 2003 **87** (2) 337

Preparation and characteristics of composites of high-crystalline cellulose with polypropylene: Effects of maleated polypropylene and cellulose content

Roncero MB, Colom JF, Vidal T// Polytech Univ Catalonia, ETSEI Terrassa, Dept Text & Paper Engr, Colom 11, ES-08222 Terrassa, Spain

Carbohydr Polym 2003 **52** (4) 411

Why oxalic acid protects cellulose during ozone treatments?

Sebastiao PJ, Cruz C*, Pires D, Ferraz A, Brogueira P, Godinho MH// *Ctr Fis Mat Condensada, Avda Prof Gama Pinto 2, PT-1649-003 Lisbon, Portugal

Liq Cryst 2002 **29** (12) 1491

Anisotropic hydroxypropylcellulose films as alignment layers of a bistable ferroelectric device

Silva GA, Eckelt J, Goncalves MC*, Wolf BA// *Univ Estadual Campinas, Inst Chem, BR-13083-970 Campinas, SP, Brazil

Polymer 2003 **44** (4) 1075

Thermodynamics of pseudo-ternary systems as a tool to predict the morphologies of cellulose acetate/polystyrene blends cast from tetrahydrofuran solutions

Stromme M, Niklasson GA, Ek R// Uppsala Univ, Dept Mat Sci, Angstrom Lab, Box 534, SE-75121 Uppsala, Sweden

Appl Phys Lett 2003 **82** (4) 648

Densification-induced conductivity percolation in high-porosity pharmaceutical microcrystalline cellulose compacts

Tengerdy RP, Szakacs G// Colorado State Univ, Tech Univ, Dept Microbiol, Fort Collins, Co 80523, USA

Biochem Eng J 2003 **13** (2-3) 169

Bioconversion of lignocellulose in solid substrate fermentation

Tzanov T, Stamenova M, Cavaco-Paulo A*// *Univ Minho, Dept Text Engr, Campus Azurem, PT-4800-058 Guimaraes, Portugal

Macromol Rapid Commun 2002 **23** (16) 962

Phosphorylation of cotton cellulose with baker's yeast hexokinase

Vaca-Garcia C, Gozzelino G, Glasser WG, Borredon ME*// *Ecole Natl Super Ing Arts Chim & Technol, Lab Chim Agro Ind, 118 Route Narbonne, FR-31077 Toulouse, France

J Polym Sci B-Polym Phys 2003 **41** (3) 281

Dynamic mechanical thermal analysis transitions of partially and fully substituted cellulose fatty esters

Vasile C, Marinescu C, Vornicu R, Staikos G*// *Univ Patras, Dept Chem Engr, POB 1414, GR-26504 Patras, Greece

J Appl Polym Sci 2003 **87** (9) 1383

Enzymatic degradation of thermoresponsive poly(*N*-isopropylacrylamide) grafted to carboxymethylcellulose copolymers

Verreck G, Six K, Van den Mooter G, Baert L, Peeters J, Brewster ME// Janssen Pharmaceut, Johnson & Johnson Pharmaceut Res & Dev, Pharmaceut Sci, Turnhoutseweg 30, BE-2340 Beerse, Belgium

Int J Pharm 2003 **251** (1-2) 165

Characterization of solid dispersions of itraconazole and hydroxypropylmethylcellulose prepared by melt extrusion: Part I

Wang CQ, Dong YP, Tan HM*// *Beijing Inst Technol, Sch Chem Engr & Mat Sci, CN-100081 Beijing, Peoples Rep China

J Polym Sci A-Polym Chem 2003 **41** (2) 273

Biodegradable brushlike graft polymers. I. Polymerization of ϵ -caprolactone onto water-soluble hydroxypropyl cellulose as the backbone by the protection of the trimethylsilyl group

Yousefi H, Wiberg G, Skytt ML, Magda JJ, Gedde UW*// *Royal Inst Technol, Dept Polymer Technol, SE-10044 Stockholm, Sweden

Polymer 2003 **44** (4) 1203

Development and relaxation of orientation in sheared concentrated lyotropic solutions of hydroxypropylcellulose in *m*-cresol

Zghida H, Baouab MHV, Gauthier R*// *Univ Claude Bernard Lyon I, UMR CNRS 5627, Polymer Mat & Interfaces Lab, 43 Blvd 11 Novembre 1918, FR-69622 Villeurbanne, France

J Appl Polym Sci 2003 **87** (10) 1660

Sorption of chromium oxy-anions onto cationized ligno-cellulosic material

Zhang YP, Shao HL*, Hu XC// *Dong Hua Univ, State Key Lab Modificat Chem Fibers & Polymer Mat, CN-200051 Shanghai, Peoples Rep China

Polym J 2002 **34** (9) 666

The chain orientation of cellulose flat and tubular films prepared from *N*-methylmorpholine *N*-oxide solutions

Zhong Q, Sandeep KP*, Swartzel KR*// *Nth Carolina State Univ, 129 Schaub Hall, Box 7624, Raleigh, NC 27695, USA

J Food Sci 2003 **68** (1) 217

Continuous flow radio frequency heating of water and carboxymethylcellulose solutions

4. Chitin/Chitosan

Aoki N, Nishikawa M, Hattori K// Kanagawa Technol Res Inst, Mol Engr Div, 705-1 Shimoimaizumi, Ebina-shi, Kanagawa 243 0435, Japan

Carbohydr Polym 2003 **52** (3) 219

Synthesis of chitosan derivatives bearing cyclodextrin and adsorption of *p*-nonylphenol and bisphenol A

Bayramoglu G, Yilmaz M, Arica MY*// *Kirikkale Univ, Dept Biol, TR-71450 Kirikkale, Turkey

Biochem Eng J 2003 **13** (1) 35

Affinity dye-ligand poly(hydroxyethyl methacrylate)/chitosan composite membrane for adsorption lysozyme and kinetic properties

Ben Shalom N, Ardi R, Pinto R, Aki C, Fallick E// Agr Res Org, Dept Food Sci, Inst Technol & Storage, POB 6, Volcani Ctr, IL-50250 Bet Dagan, Israel

Crop Prot 2003 **22** (2) 285

Controlling gray mould caused by *Botrytis cinerea* in cucumber plants by means of chitosan

Bratskaya SY, Avramenko VA, Sukhovverkhov SV, Schwarz S// Russian Acad Sci Far East Div, Inst Chem, pr Stoletiya Vladivostoka 159, RU-690022 Vladivostok, Russia

Colloid J-Engl Tr 2002 **64** (6) 681

Flocculation of humic substances and their derivatives with chitosan

Cardenas G, Sanzana J, Mei LHI// Concepcion Univ, Fac Ciencias Quim, Dept Polimeros, Casilla 160-C, Concepcion, Chile

Bol Soc Chil Quim 2002 **47** (4) 529

Synthesis and characterization of chitosan-PHB blends

Chang KLB, Lin YS, Chen RH*// *Nat'l Taiwan Ocean Univ, Dept Food Sci, 2 Pei Ning Rd, Chilung 202, Taiwan

J Food Eng 2003 **57** (4) 315

The effect of chitosan on the gel properties of tofu (soybean curd)

Chen LY, Du YM*, Zeng XQ// *Wuhan Univ, Dept Environm Sci, CN-430072 Wuhan, Peoples Rep China

Carbohydr Res 2003 **338** (4) 333

Relationships between the molecular structure and moisture-absorption and moisture-retention abilities of carboxymethyl chitosan. II. Effect of degree of deacetylation and carboxymethylation

Ding W, Lian Q, Samuels RJ, Polk MB*// *Georgia Inst Technol, Sch Text & Fiber Engr, Atlanta, Ga 30332, USA

Polymer 2003 **44** (3) 547

Synthesis and characterization of a novel derivative of chitosan

Dong YM, Sakurai K, Wu YS, Kondo Y// Xiamen Univ, Dept Mat Sci, CN-361005 Xiamen, Peoples Rep China

Polym Bull 2002 **49** (2-3) 189

Multiple crystalline morphologies of *N*-alkyl chitosan solution cast films

Dos Santos DS, Bassi A, Misoguti L, Ginani MF, De Oliveira ON, Mendonca CR*// *Univ Sao Paulo, Inst Fis Sao Carlos, CP 369, BR-13560-970 Sao Carlos, SP, Brazil

Macromol Rapid Commun 2002 **23** (16) 975

Spontaneous birefringence in layer-by-layer films of chitosan and azo dye Sunset Yellow

Duarte ML, Ferreira MC, Marvao MR, Rocha J// Univ Lisbon, CECUL, Dept Chem & Biochem, Estrada Paco Lumiar, PT-1749-016 Lisbon, Portugal

Int J Biol Macromol 2002 **31** (1-3) 1

An optimised method to determine the degree of acetylation of chitin and chitosan by FTIR

Hamman JH, Schultz CM, Kotze AF// Technikon Pretoria, Fac Hlth Sci, Sch Pharm, Private Bag X680, ZA-0001 Pretoria, Rep Sth Africa

Drug Dev Ind Pharm 2003 **29** (2) 161

N-Trimethyl chitosan chloride: Optimum degree of quaternization for drug absorption enhancement across epithelial cells

Huang YC, Chiang CH, Yeh MK*// *Nat'l Def Med Ctr, Grad Inst Life Sci, Taipei, Taiwan

J Microencapsul 2003 **20** (2) 247

Optimizing formulation factors in preparing chitosan microparticles by spray-drying method

Jin L, Bai RB*// *Nat'l Univ Singapore, Dept Chem & Environm Engr, 10

- Kent Ridge Crescent, SG-119260 Singapore, Rep Singapore
Langmuir 2002 **18** (25) 9765
 Mechanisms of lead adsorption on chitosan/PVA hydrogel beads
 Kim SJ, Shin SR, Lee YM, Kim SI*// *Sundong, PO Box 55, Seoul 133605, South Korea
J Appl Polym Sci 2003 **87** (12) 2011
 Swelling characterizations of chitosan and polyacrylonitrile semi-interpenetrating polymer network hydrogels
 Kim TH, Park YH, Kim KJ, Cho CS*// *Seoul Natl Univ, Sch Agr Biotechnol, 103 Serdun dong, Kwonsun gu, Suwon 441744, South Korea
Int J Pharm 2003 **250** (2) 371
 Release of albumin from chitosan-coated pectin beads *in vitro*
 Kumbhar SG, Soppimath KS, Aminabhavi TM*// *Karnatak Univ, Ctr Excellence Polymer Sci, IN-580003 Dharwad, Karnataka, India
J Appl Polym Sci 2003 **87** (9) 1525
 Synthesis and characterization of polyacrylamide-grafted chitosan hydrogel microspheres for the controlled release of indomethacin
 Kweon DK, Lim ST// Natl Inst Adv Ind Sci & Technol, Special Div Human Life Technol, Green Biotechnol Res Grp, Ikeda, Osaka 563 8577, Japan
J Appl Polym Sci 2003 **87** (11) 1784
 Preparation and characteristics of a water-soluble chitosan-heparin complex
 Lin WJ, Kang WW// Natl Taiwan Univ, Sch Pharm, Coll Med, Taipei 100, Taiwan
J Microencapsul 2003 **20** (2) 169
 Comparison of chitosan and gelatin coated microparticles: Prepared by hot-melt method
 Liu WG, Li F, Zhao XD, De Yao K*, Liu QG*// *Tianjin Univ, Res Inst Polymer Mat, CN-300072 Tianjin, Peoples Rep China
Polym Int 2002 **51** (12) 1459
 Atom force microscopic characterisation of the interaction forces between bovine serum albumin and cross-linked alkylated chitosan membranes in media of different pH
 Liu XD, Tokura S, Nishi N, Sakairi N*// *Hokkaido Univ, Grad Sch Environm Earth Sci, Div Biosci, Kita ku, Sapporo, Hokkaido 060 081, Japan
Polymer 2003 **44** (4) 1021
 A novel method for immobilization of chitosan onto nonporous glass beads through a 1,3-thiazolidine linker
 No HK, Nah JW, Meyers SP// Catholic Univ Daegu, Dept Food Sci & Technol, Hayang 712702, South Korea
J Appl Polym Sci 2003 **87** (12) 1890
 Effect of time/temperature treatment parameters on depolymerization of chitosan
 Okamoto H, Nishida S, Todo H, Sakakura Y, Iida K, Danjo K// Meijo Univ, Fac Pharm, 150 Yagotoyama, Tempaku ku, Nagoya, Aichi 468 8503, Japan
J Pharm Sci 2003 **92** (2) 371
 Pulmonary gene delivery by chitosan-pDNA complex powder prepared by a supercritical carbon dioxide process
 Perugini P, Genta I, Conti B, Modena T, Pavanetto F// Univ Pavia, Dept Pharmaceut Chem, Viale Taramelli 12, IT-27100 Pavia, Italy
Int J Pharm 2003 **252** (1-2) 1
 Periodontal delivery of ipriflavone: New chitosan/PLGA film delivery system for a lipophilic drug
 Qin CQ, Du YM*, Xiao L, Li Z, Gao XH*// *Wuhan Univ, Dept Environm Sci, CN-430072 Wuhan, Peoples Rep China
Int J Biol Macromol 2002 **31** (1-3) 111
 Enzymic preparation of water-soluble chitosan and their antitumor activity
 Rege PR, Garmise RJ, Block LH// Duquesne Univ, Dept Med Chem & Pharmaceut, Pittsburgh, Pa 15282, USA
Int J Pharm 2003 **252** (1-2) 41
 Spray-dried chitosans. Part I: Preparation and characterization
 Rege PR, Garmise RJ, Block LH// Address as above
Int J Pharm 2003 **252** (1-2) 53
 Spray-dried chitosans. Part II: *in vitro* drug release from tablets made from spray-dried chitosans
 Rodriguez MS, Ramos V, Agullo E*// *Univ Nacl Sur, Dept Quim, LIBAQ, Avda Alem 1253, AR-8000 Bahia Blanca, Argentina
J Food Sci 2003 **68** (1) 271
 Antimicrobial action of chitosan against spoilage organisms in precooked pizza
 Sharma A, Mondal K, Gupta MN*// *Indian Inst Technol, Dept Chem, Hauz Khas, IN-110016 New Delhi, India
Carbohydr Polym 2003 **52** (4) 433
 Some studies on characterization of three phase partitioned chitosan
 Skorik YA, Gomes CAR, Vasconcelos MTSD, Yatluk YG// Univ Porto, Fac Ciencias, LAQUIPAI, Rua Campo Alegre 687, PT-4169-007 Oporto, Portugal
Carbohydr Res 2003 **338** (3) 271
 N-(2-Carboxyethyl)chitosans: Regioselective synthesis, characterisation and protolytic equilibria
 Snyman D, Hamman JH, Kotze AF*// *Potchefstroom Univ Christian Higher Educ, Fac Hlth Sci, Sch Pharm, Dept Pharmaceut, ZA-2520 Potchefstroom, Rep Sth Africa
Drug Dev Ind Pharm 2003 **29** (1) 61
 Evaluation of the mucoadhesive properties of N-trimethyl chitosan chloride
 Sun T, Xu PX*, Liu Q, Xue JA, Xie WM*// *Zhejiang Univ, Dept Chem, Yuquan Campus, CN-310027 Hangzhou, Peoples Rep China
Eur Polym J 2003 **39** (1) 189
 Graft copolymerization of methacrylic acid onto carboxymethyl chitosan
 Wan Y, Creber KAM*, Peppley B, Bui VT*// *Royal Military Coll Canada, Dept Chem & Chem Engn, POB 17000, Stn Forces, Kingston, Ontario, Canada K7K 7B4
Polymer 2003 **44** (4) 1057
 Ionic conductivity of chitosan membranes
- ## 5. Cyclodextrins
- Abushoffa AM, Fillet M, Servais AC, Hubert P, Crommen J*// *Univ Liege, CHU, Inst Pharm, Dept Analyt Pharmaceut Chem, B 36, BE-4000 Liege 1, Belgium
Electrophoresis 2003 **24** (3) 343
 Enhancement of selectivity and resolution in the enantioseparation of uncharged compounds using mixtures of oppositely charged cyclodextrins in capillary electrophoresis
 Aktas Y, Unlu N*, Orhan M, Irkeç M, Hincal AA*// *Hacettepe Univ, Fac Pharm, Dept Pharmaceut Technol, TR-06100 Ankara, Turkey
Drug Dev Ind Pharm 2003 **29** (2) 223
 Influence of hydroxypropyl β -cyclodextrin on the corneal permeation of pilocarpine
 Aree T, Chaichit N// Chulalongkorn Univ, Fac Sci, Dept Chem, Phyathai Rd, TH-10330 Bangkok, Thailand
Carbohydr Res 2003 **338** (5) 439
 Crystal structure of β -cyclodextrin-benzoic acid inclusion complex
 Busby MB, Lim P, Vigh G*// *Texas A&M Univ, Dept Chem, College Station, Tx 77842, USA
Electrophoresis 2003 **24** (3) 351
 Synthesis, analytical characterization and use of octakis(2,3-di-O-methyl-6-O-sulfo)- γ -cyclodextrin, a novel, single-isomer, chiral resolving agent in low-pH background electrolytes
 Busby MB, Maldonado O, Vigh G*// *Address as above
J Chromatogr A 2003 **990** (1-2) 63
 Electrophoretic enantiomer separations at high pH using the new, single-isomer octakis(2,3-dimethyl-6-O-sulfo)- γ -cyclodextrin as chiral resolving agent
 Cucinotta V, Giuffrida A, Grasso G, Maccarrone G, Vecchio G// Univ Catania, Dipt Sci Chim, Viale A Doria 6, IT-95125 Catania, Italy
Analyst 2003 **128** (2) 134
 Ligand exchange chiral separations by cyclodextrin derivatives in capillary electrophoresis
 Galant C, Amiel C*, Wintgens V, Sebillé B, Auvray L// *UMR 7581 CNRS, Lab Rech Polymères, 2-8 rue Henri Dunant, FR-94320 Thiais, France
Langmuir 2002 **18** (25) 9687
 Ternary complexes with poly(β -cyclodextrin), cationic surfactant, and polyanion in dilute aqueous solution: A viscometric and small-angle neutron scattering study
 Harata K// AIST, Biol Informat Res Ctr, Tsukuba Cent 6, 1-1-1 Higashi, Tsukuba, Ibaraki 305 8566, Japan
Carbohydr Res 2003 **338** (4) 353
 Crystallographic analysis of the thermal motion of the inclusion complex of cyclomaltoheptaose (β -cyclodextrin) with hexamethylenetetramine
 Ikeda T, Lee WK, Ooya T, Yui N*// *Japan Adv Inst Sci & Technol, Sch Mat Sci, 1-1 Asahidai, Ishikari, Hokkaido 923 129, Japan
J Phys Chem B 2003 **107** (1) 14
 Thermodynamic analysis of inclusion complexation between α -cyclodextrin-based molecular tube and poly(ethylene oxide)-block-poly(tetrahydrofuran)-block-poly(ethylene oxide) triblock copolymer
 Koester LS, Mayorga P, Bassani VL*// *Univ Fed Rio Grande do Sul, Fac Farm, Programa Posgrad Ciencias Farmaceut, Avda Ipiranga 2752, BR-90610-000 Porto Alegre, RS, Brazil
Drug Dev Ind Pharm 2003 **29** (2) 139
 Carbamazepine/ β CD/HPMC solid dispersions. I. Influence of the spray-drying process and β CD/HPMC on the drug dissolution profile
 Koester LS, Mayorga P, Pereira VP, Petzhöld CL, Bassani VL*// *Address as above
Drug Dev Ind Pharm 2003 **29** (2) 145
 Carbamazepine/ β CD/HPMC solid dispersions. II. Physical characterization

Law H, Baussanne I, Fernandez JMG, Defaye J*// *Dept Pharmacochim Mol, UMR 5063 CNRS, BP 138, FR-38243 Meylan, France
Carbohydr Res 2003 **338** (5) 451

Regioselective sulfonylation at O-2 of cyclomaltoheptaose with 1-(*p*-tolyl-sulfonyl)-(1*H*)-1,2,4-triazole

Masson M, Sigurjonsdottir JF, Jonsdottir S, Loftsson T// Univ Iceland, Fac Pharm, POB 7210, IS-127 Reykjavik, Iceland
Drug Dev Ind Pharm 2003 **29** (1) 107

Examination of ¹⁹F-NMR as a tool for investigation of drug-cyclodextrin complexes

Matsunaga H, Tanimoto T, Haginaka J*// *Mukogawa Womens Univ, Fac Pharmaceut Sci, 11-68 Koshien Kyuban cho, Nishinomiya, Hyogo 663 8179, Japan
J Sep Sci 2002 **25** (15-17) 1175

Separation of basic drug enantiomers by capillary electrophoresis using methylated glucuronyl glucosyl β -cyclodextrin as a chiral selector

Memisoglu E, Bochot A, Ozalp M, Sen M, Duchene D, Hincal AA*// *Hacettepe Univ, Fac Pharm, Dept Pharmaceut Technol, TR-06100 Ankara, Turkey
Pharmaceut Res 2003 **20** (1) 117

Direct formation of nanospheres from amphiphilic β -cyclodextrin inclusion complexes

Rusa CC, Bullions TA, Fox J, Porbeni FE, Wang XW, Tonelli AE*// *Nth Carolina State Univ, Fiber & Polymer Sci Program, Campus Box 8301, Raleigh, NC 27695, USA
Langmuir 2002 **18** (25) 10016

Inclusion compound formation with a new columnar cyclodextrin host

Servais AC, Fillet M, Abushoffa AM, Hubert P, Crommen J*// *Univ Liege, CHU, Inst Pharm, Dept Analyt Pharmaceut Chem, B 36, BE-4000 Liege 1, Belgium
Electrophoresis 2003 **24** (3) 363

Synergistic effects of ion-pairing in the enantiomeric separation of basic compounds with cyclodextrin derivatives in nonaqueous capillary electrophoresis

Shaker DS, Ghanem AH, Li SK, Warner KS, Hashem FM, Higuchi WI// Univ Utah, Dept Pharmaceut & Pharmaceut Chem, 213 Skaggs Hall, 30 Sth 2000 East, Salt Lake City, Ut 84112, USA
Int J Pharm 2003 **253** (1-2) 1

Mechanistic studies of the effect of hydroxypropyl- β -cyclodextrin on *in vitro* transdermal permeation of corticosterone through hairless mouse skin

Shehatta IS, Ibrahim MS, Sultan MR// Univ Mansoura, Fac Sci, Dept Chem, Mansoura, Egypt
Can J Chem 2002 **80** (10) 1313

The antimicrobial nalidixic acid as a probe for molecular recognition of α - and β -cyclodextrins

Storsberg J, Van Aert H, Van Roost C, Ritter H*// *Univ Dusseldorf, Inst Organ Chem & Makromol Chem, Universitätsstr 1, DE-40225 Dusseldorf, Germany
Macromolecules 2003 **36** (1) 50

Cyclodextrins in polymer synthesis: A simple and surfactant free way to polymer particles having narrow particle size distribution

Suzuki M, Shimazaki T// Tokyo Inst Technol, Grad Sch Sci & Engr, Dept Organ & Polymer Mat, 2-12-1 Ookayama, Meguro ku, Tokyo 152 8552, Japan
Org Biomol Chem 2003 **1** (3) 604

Preparation of a unique glucan with large intervals in molecular weight distribution. Controlled ring-opening polymerization of *O*-permethylcyclodextrin

Valero M, Perez-Revuelta BI, Rodriguez LJ*// *Univ Salamanca, Fac Farm, Dept Quim Fis, ES-37007 Salamanca, Spain
Int J Pharm 2003 **253** (1-2) 97

Effect of PVPK-25 on the formation of the naproxen- β -cyclodextrin complex

Yuan DQ, Kishikawa N, Yang C, Koga K, Kuroda N, Fujita K// Nagasaki Univ, Grad Sch Biomed Sci, Dept Mol Med Sci, Bunkyo machi 1-14, Nagasaki 852 8521, Japan
Chem Commun 2003 (3) 416

Fluorophore-capped cyclodextrins as efficient chemical-to-light energy converters

6. Lignin

Lawoko M, Henriksson G, Gellerstedt G// Royal Inst Technol, Dept Fiber & Polymer Technol, Drottning Kristinas Vag 53, SE-10044 Stockholm, Sweden
Holzforchung 2003 **57** (1) 69

New method for quantitative preparation of lignin-carbohydrate complex from unbleached softwood kraft pulp: Lignin-polysaccharide networks I

Li Y, Sarkanen S*// *Univ Minnesota, Dept Wood & Paper Sci, St Paul, Mn 55108, USA
Macromolecules 2002 **35** (26) 9707

Alkylated Kraft lignin-based thermoplastic blends with aliphatic polyesters

Sun RC, Tomkinson J, Ye J// Univ Coll Nth Wales, Biocomposites Ctr, Bangor LL57 2UW, Wales
Polym Degrad Stabil 2003 **79** (2) 241

Physico-chemical and structural characterization of residual lignins isolated with TAED activated peroxide from ultrasound irradiated and alkali pre-treated wheat straw

7. Lipopolysaccharides

Molinaro A, Silipo A, Lanzetta R, Newman MA, Dow JM, Parrilli M*// *Univ Naples Federico II, Dipt Chim Organ & Biol, via Mezzocannone 16, IT-80134 Naples, Italy
Carbohydr Res 2003 **338** (3) 277

Structural elucidation of the O-chain of the lipopolysaccharide from *Xanthomonas campestris* strain 8004

Perepelov AV, Bartodziejska B, Senchenkova SN, Shashkov AS, Rozalski A, Knirel YA// Russian Acad Sci, ND Zelinskii Organ Chem Inst, RU-119991 Moscow, Russia
Carbohydr Res 2003 **338** (4) 327

Structure of the O-specific polysaccharide of *Proteus vulgaris* O45 containing 3-acetamido-3,6-dideoxy-D-galactose

Vinogradov E, Korenevsky A, Beveridge TJ// Natl Res Council Canada, Inst Biol Sci, 100 Sussex Dr, Ottawa, Ontario, Canada K1A 0R6
Carbohydr Res 2003 **338** (4) 385

The structure of the O-specific polysaccharide chain of the *Shewanella* algae BrY lipopolysaccharide

8. Pectin

Abdel-Hamid MI, Khairou KS, Hassan RM// Assiut Univ, Fac Sci, Dept Chem, EG-71516 Assiut, Egypt
Eur Polym J 2003 **39** (2) 381

Kinetics and mechanism of permanganate oxidation of pectin polysaccharide in acid perchlorate media

Bedouet L, Courtois B, Courtois J*// *Univ Picardie, IUT/GB, Dept Appl Biol, Lab Polysaccharides Microbiens & Vegetaux, Ave Fac/le Bailly, FR-80025 Amiens, France
Carbohydr Res 2003 **338** (4) 379

Rapid quantification of *O*-acetyl and *O*-methyl residues in pectin extracts

Bochek AM, Zabivalova NM, Shamolina II, Grishanov SA// Russian Acad Sci, Inst Macromol Cpds, RU-199004 St Petersburg, Russia
Russ J Appl Chem-Eng Tr 2002 **75** (9) 1517

Isolation of pectins from flax pedicels and fibers and their characterization

Bonnin E, Le Goff A, Van Alebeek GJWM, Voragen AGJ, Thibault JF// Unite Rech Polysaccharides Organist Interact INRA, BP 71627, FR-44316 Nantes 03, France
Carbohydr Polym 2003 **52** (4) 381

Mode of action of *Fusarium moniliforme* endopolygalacturonase towards acetylated pectin

Glushka JN, Terrell M, York WS, O'Neill MA, Gucwa A, Darvill AG, Albersheim P, Prestegard JH*// *Univ Georgia, Dept Chem, Complex Carbohydrate Res Ctr, 220 Riverbend Rd, Athens, Ga 30602, USA
Carbohydr Res 2003 **338** (4) 341

Primary structure of the 2-*O*-methyl- α -L-fucose-containing side chain of the pectic polysaccharide, rhamnogalacturonan II

Iijima M, Hatakeyama T*, Nakamura K, Hatakeyama H// *Otsuma Womens Univ, 12 Sanban cho, Chiyoda ku, Tokyo 102 8357, Japan
J Therm Anal Calorim 2002 **70** (3) 815

Effect of annealing on calcium pectin gel formation by thermomechanical analysis

Semde R, Moes AJ, Devleeschouwer MJ, Amighi K*// *Free Univ Brussels, Pharm Inst, Lab Pharmaceut & Biopharmaceut, Campus Plaine, CP207, Blvd Triomphe, BE-1050 Brussels, Belgium
Drug Dev Ind Pharm 2003 **29** (2) 203

Synthesis and enzymatic degradation of epichlorohydrin cross-linked pectins

Seshadri R, Weiss J*, Hulbert GJ, Mount J// *Univ Tennessee, Dept Food Sci & Technol, Food Chem & Biophys Lab, 102 Food Safety & Processing Bldg, 2605 River Rd, Knoxville, Tn 37996, USA
Food Hydrocolloid 2003 **17** (2) 191

Ultrasonic processing influences rheological and optical properties of high-methoxyl pectin dispersions

Uresti RM, Lopez-Arias N, Gonzalez-Cabriaes JJ, Ramirez JA*, Vazquez M// *Univ Autonoma Tamaulipas Reynosa Aztlan, Unidad Acad Multidisciplinaria, Apdo Postal 1015, MX-88700 Tamaulipas, Mexico
Food Hydrocolloid 2003 **17** (2) 171

Use of amidated low methoxyl pectin to produce fish restructured products

9. Starch

- Aarathi A, Urooj A*, Puttaraj S// *Univ Mysore, Dept Studies Food Sci & Nutr, IN-570006 Mysore, India
Starch 2003 **55** (2) 94
- In vitro* starch digestibility and nutritionally important starch fractions in cereals and their mixtures
- Abramovic H, Klofutar C// Univ Ljubljana, Biotech Fac, Jamnikarjeva 101, SK-1000 Ljubljana, Slovenia
Acta Chim Slov 2002 **49** (4) 835
- Water adsorption isotherms of some maltodextrin samples
- Auzely-Velty R, Rinaudo M// Univ Grenoble I, CNRS, Ctr Rech Macromol Vegetales, BP 53, FR-38041 Grenoble, France
Int J Biol Macromol 2002 **31** (4-5) 123
- Synthesis of starch derivatives with labile cationic groups
- Baczakowicz M, Wojtowicz D, Anderegg JW, Schilling CH, Tomasik P*// *Univ Agr, Dept Chem, Cracow, Poland
Carbohydr Polym 2003 **52** (3) 263
- Starch complexes with bismuth (III) and (V)
- Bialopiotrowicz T// Maria Curie-Sklodowska Univ, Fac Chem, Dept Interfacial Phenomena, Pl Marie Curie-Sklodowskiej 3, PL-20031 Lublin, Poland
Food Hydrocolloid 2003 **17** (2) 141
- Wettability of starch gel films
- Butrim SM, Bilydyukovich TD, Butrim NS, Yurkshtovich TL// Belarussian State Univ, Res Inst Physicochem Problems, BY-220050 Minsk, Byelarus
Russ J Appl Chem-Eng Tr 2002 **75** (8) 1320
- Heterogeneous O-nitration of carboxy starch
- De Graaf RA, Karman AP, Janssen LPBM// Azko Nobel Chem, Safety Serv, Zutphenweg 10, NL-7400 AA Deventer, The Netherlands
Starch 2003 **55** (2) 80
- Material properties and glass transition temperatures of different thermoplastic starches after extrusion processing
- De Graaf RA, Janssen LPBM// Address as above
Adv Polym Technol 2003 **22** (1) 56
- The hydroxypropylation of starch in a self-wiping twin screw extruder
- Garzon GA, Gaines CS*, Mohamed A, Palmquist DE// *USDA/ARS, Soft Wheat Qual Lab, 1680 Madison Ave, Wooster, Oh 44691, USA
Cereal Chem 2003 **80** (2) 154
- Effect of oil content and pH on the physicochemical properties of corn starch-soybean oil composites
- Gonzalez-Reyes E, Mendez-Montecalvo G, Solorza-Feria J, Toro-Vazquez JF, Bello-Perez LA*// *IPN, Ctr Desarrollo Prod Bioticos, Apartado Postal 24, Carr Yautepec-Jojutla km 8.5, Colonia San Isidro, MX-62731 Yautepec, Morelos, Mexico
Carbohydr Polym 2003 **52** (3) 297
- Rheological and thermal characterization of *Okenia hypogaea* (Schlech & Cham) starch
- Hartikainen R, Lindstrom M, Forssell P*// *VTT Biotechnol, PO Box 1500, FI-02044 VTT Espoo, Finland
Carbohydr Polym 2003 **52** (4) 375
- Diffusion of KCl in an amylose film
- Heinze U, Klemm D, Unger E, Pieschel F// Univ Jena, Inst Organ Chem & Makromol Chem, Humboldtstr 10, DE-07743 Jena, Germany
Starch 2003 **55** (2) 55
- New starch phosphate carbamides of high swelling ability: Synthesis and characterization
- Hoover R, Smith C, Zhou Y, Ratnayake RMWS// Memorial Univ Newfoundland, Dept Biochem, St John's, Newfoundland, Canada A1B 3X9
Carbohydr Polym 2003 **52** (3) 253
- Physicochemical properties of Canadian oat starches
- Krogars K, Heinamaki J, Karjalainen M, Niskanen A, Leskela M, Yliruusi J// Univ Helsinki, Dept Pharm, Pharmaceut Technol Div, POB 56, FI-00014 Helsinki, Finland
Int J Pharm 2003 **251** (1-2) 205
- Enhanced stability of rubbery amylose-rich maize starch films plasticized with a combination of sorbitol and glycerol
- Lee SW, Rhee C*// *Korea Univ, Coll Life & Environm Sci, Div Food Sci, 1,5-Ka, Anam dong, Sungbuk ku, Seoul 136701, South Korea
Starch 2003 **55** (2) 87
- Influence of pine nut (*Pinus koraiensis*) oil fractions on physicochemical properties of rice starch solutions
- Lim HS, BeMiller JN*, Lim ST// *Purdue Univ, Whistler Ctr Carbohydrate Res, Food Sci Bldg, West Lafayette, In 47907, USA
Cereal Chem 2003 **80** (2) 198
- Effect of dry heating with ionic gums at controlled pH on starch paste viscosity
- Majzoobi M, Rowe AJ, Connock M, Hill SE, Harding SE*// *Univ Nottingham, Sch Biosci, Sutton Bonington Campus, Loughborough LE12 5RD, England
Carbohydr Polym 2003 **52** (3) 269
- Partial fractionation of wheat starch amylose and amylopectin using zonal ultracentrifugation
- Nelles EM, Dewar J, Van der Merwe CF, Taylor JRN*// *Univ Pretoria, Dept Food Sci, ZA-0002 Pretoria, Rep Sth Africa
Starch 2003 **55** (2) 72
- Granule integrity and starch solubility during slow, extended pasting of maize starch: The second viscosity peak
- Niba LL// Virginia Polytech Inst & State Univ, Dept Human Nutr Foods & Exercise, 319 Wallace Hall, Blacksburg, Va 24060, USA
Int J Food Sci Nutr 2003 **54** (1) 97
- Processing effects on susceptibility of starch to digestion in some dietary starch sources
- Noda T, Nishiba Y, Sato T, Suda I// Natl Agr Res Org, Natl Agr Res Ctr Kyushu Okinawa Reg, Kumamoto 861 1192, Japan
Cereal Chem 2003 **80** (2) 193
- Properties of starches from several low-amylose rice cultivars
- Odusanya OS, Manan DMA, Ishiaku US, Azemi BMN// Biotechnol Adv Lab, PMB 186 Garki, Sheda Sci & Technol Complex, Abuja, Nigeria
J Appl Polym Sci 2003 **87** (6) 877
- Effect of starch predrying on the mechanical properties of starch/poly(ϵ -caprolactone) composites
- Ozcan S, Jackson DS*// *Univ Nebraska, Dept Food Sci & Technol, Lincoln, Ne 68583, USA
Cereal Chem 2003 **80** (2) 241
- A response surface analysis of commercial corn starch annealing
- Rashmi S, Urooj A*// *Univ Mysore, Dept Studies Food Sci & Nutr, IN-570006 Mysore, India
Int J Food Sci Nutr 2003 **54** (1) 27
- Effect of processing on nutritionally important starch fractions in rice varieties
- Serna-Saldivar SO, Mezo-Villanueva M// Inst Tecnol & Estudios Super Monterrey, Dept Tecnol Alimentos, Avda Eugenio Garza Sada 2501 Sur, MX-64849 Monterrey, NL, Mexico
Cereal Chem 2003 **80** (2) 148
- Effect of a cell-wall-degrading enzyme complex on starch recovery and steeping requirements of sorghum and maize
- Sevenou O, Hill SE*, Farhat IA, Mitchell JR// *Univ Nottingham, Sch Biosci, Div Food Science, Sutton Bonington Campus, Loughborough LE12 5RD, England
Int J Biol Macromol 2002 **31** (1-3) 79
- Organisation of the external region of the starch granule as determined by infrared spectroscopy
- Shogren RL// USDA/ARS, Plant Polym Res Unit, Nat Ctr Agr Utilization Res, 1815 Nth University St, Peoria, Il 61604, USA
Carbohydr Polym 2003 **52** (3) 319
- Rapid preparation of starch esters by high temperature/pressure reaction
- Singh N, Singh J, Kaur L, Sodhi NS, Gill BS// Guru Nanak Dev Univ, Dept Food Sci, IN-143005 Amritsar, India
Food Chem 2003 **81** (2) 219
- Morphological, thermal and rheological properties of starches from different botanical sources
- Takeda Y, Shibahara S, Hanashiro I// Kagoshima Univ, Fac Agr, Dept Biochem Sci & Technol, Kagoshima 890 0065, Japan
Carbohydr Res 2003 **338** (5) 471
- Examination of the structure of amylopectin molecules by fluorescent labeling
- Teramoto N, Motoyama T, Yosomiya R, Shibata M// Chiba Inst Technol, Fac Engr, Dept Ind Chem, 2-17-1 Tsudanuma, Chiba 275 0016, Japan
Eur Polym J 2003 **39** (2) 255
- Synthesis, thermal properties, and biodegradability of propyl-etherified starch
- Terenina MB, Krikunova NI, Misharina TA*// *Russian Acad Sci, NM Emanuel Inst Biochem Phys, 4 ul Kosygina, RU-119991 Moscow, Russia
Russ Chem Bull 2002 **51** (9) 1689
- Binding of cyclic compounds by starch cryotextures from aqueous solutions
- Tufvesson F, Wahlgren M, Eliasson AC*// *Lund Univ, Dept Food Technol, POB 124, Ctr Chem & Chem Engr, SE-22100 Lund, Sweden
Starch 2003 **55** (2) 61
- Formation of amylose-lipid complexes and effects of temperature treatment. Part I. Monoglycerides
- Vladimirov AV, Volkova TV// Russian Acad Sci, Inst Chem Solut, Ivanovo, Russia
Russ J Phys Chem 2002 **76** (12) 1981
- The influence of amylose on the stability constants of triiodide complexes and the solubility of iodine in aqueous solutions
- Waliszewski KN, Aparicio MA, Bello LA, Monroy A// Inst Tecnol Veracruz,

- Ma de Quevedo 2779, AP 1380, MX-91860 Veracruz, Mexico
Carbohydr Polym 2003 **52** (3) 237
 Changes of banana starch by chemical and physical modification
- Wang YJ, Liu WJ, Sun ZH// Univ Arkansas, Dept Food Sci, Fayetteville, Ar 72704, USA
J Mater Sci Lett 2003 **22** (1) 57
 Effects of granule size and shape on morphology and tensile properties of LDPE and starch blends
- Wang YJ, Wang L// Univ Arkansas, Dept Food Sci, 2650 Nth Young Ave, Fayetteville, Ar 72704, USA
Carbohydr Polym 2003 **52** (3) 207
 Physicochemical properties of common and waxy corn starches oxidized by different levels of sodium hypochlorite
- Wang YJ, Truong VD, Wang L// Univ Arkansas, Dept Food Sci, 2650 Nth Young Ave, Fayetteville, Ar 72704, USA
Carbohydr Polym 2003 **52** (3) 327
 Structures and rheological properties of corn starch as affected by acid hydrolysis
- Yoshida H, Nozaki K, Hanashiro I, Yagi F, Ito H, Honma M, Matsui H, Takeda Y*// *Kagoshima Univ, Fac Agr, Dept Biol Sci & Technol, Kagoshima 890 8865, Japan
Carbohydr Res 2003 **338** (5) 463
 Structure and physicochemical properties of starches from kidney bean seeds at immature, premature and mature stages of development
- Zhai M, Yoshii F*, Kume T// *Takasaki Radiat Chem Res Estab, Japan Atomic Energy Res Inst, Watanuki-machi, Takasaki-shi, Gunma-ken 370 1292, Japan
Carbohydr Polym 2003 **52** (3) 311
 Radiation modification of starch-based plastic sheets
- Zimeri JE, Kokini JL*// *Rutgers Univ, Cook Coll, Dept Food Sci, Ctr Adv Food Technol, 65 Dudley Rd, New Brunswick, NJ 08901, USA
Carbohydr Polym 2003 **52** (3) 225
 Morphological characterization of the phase behavior of inulin-waxy maize starch systems in high moisture environments
- ## 10. Starch-degrading enzymes
- Brandam C, Meyer XM, Proth J, Strehaiano P, Pingaud H// Lab Genie Chim, UMR 5503 CNRS, 5 rue Paulin Talabot, FR-31106 Toulouse, France
Biochem Eng J 2003 **13** (1) 43
 An original kinetic model for the enzymatic hydrolysis of starch during mashing
- Greffé L, Jensen MT, Chang-Pi-Hin F, Fruchard S, O'Donohue MJ, Svensson B, Driguez H*// *Univ Grenoble I, CERMAV-CNRS, BP 53, FR-38041 Grenoble 9, France
Chem-Eur J 2002 **8** (23) 5447
 Chemocatalytic syntheses of linear and branched hemithiomaltodextrins as potential inhibitors for starch-debranching enzymes
- Huang HJ, Ridgway D, Gu TY*, Moo-Young M// *Ohio Univ, Dept Chem Engr, Athens, Oh 45701, USA
Enzyme Microb Technol 2003 **32** (3-4) 407
 A segregated model for heterologous amylase production by *Bacillus subtilis*
- Lim LH, Macdonald DG, Hill GA*// *Univ Saskatchewan, Dept Chem Engr, 110 Sci Pl, Saskatoon, Saskatchewan, Canada S7N 5C9
Biochem Eng J 2003 **13** (1) 53
 Hydrolysis of starch particles using immobilized barley α -amylase
- Nirmala M, Muralikrishna G*// *Cent Food Tech Res Inst, Dept Biochem & Nutr, IN-570013 Mysore, India
Carbohydr Polym 2003 **52** (3) 275
 In vitro digestibility studies of cereal flours and starches using purified finger millet (*Eleusine coracana*, ragi, Indaf-15) amylases
- ## 11. Polysaccharides - Microbial
- El Gazayerly ON// Cairo Univ, Fac Pharm, Pharmaceut Dept, EG-11562 Cairo, Egypt
Drug Dev Ind Pharm 2003 **29** (2) 241
 Release of pentoxifylline from xanthan gum matrix tablets
- Fukada H, Takahashi K, Kitamura S, Yuguchi Y, Urakawa H, Kajiura K*// *Kyoto Inst Technol, Fac Engr & Design, Sakyo ku, Kyoto, Matsugasaki 606, Japan
J Therm Anal Calorim 2002 **70** (3) 797
 Thermodynamics and structural aspect of the gelling process in the gellan gum/metal salt aqueous solutions
- Hwang HJ, Kim SW, Xu CP, Choi JW, Yun JW*// *Daegu Univ, Dept Biotechnol, Kyungsan 712714, Kyungbuk, South Korea
J Appl Microbiol 2003 **94** (4) 708
 Production and molecular characteristics of four groups of exopolysaccharides from submerged culture of *Phellinus gilvus*
- Imbert P, Sadtler VM*, Dellacherie E// *UMR CNRS-INPL 7568, Lab Chim Phys Macromol, Grp ENSIC, 1 rue Grandville, BP 451, FR-54001 Nancy, France
Colloid Surface A 2002 **211** (2-3) 157
 Phenoxy-substituted dextrans as emulsifying agent: Role of the substitution ratio on O/W emulsion stability and interfacial activity
- Matsuda M, Yamori T, Naitoh M, Okutani K*// *Kagawa Sci & Technol Res Ctr, 2217-16 Hayashi cho, Kagawa 761 0301, Japan
Mar Biotechnol 2003 **5** (1) 13
 Structural revision of sulfated polysaccharide B1 isolated from a marine *Pseudomonas* species and its cytotoxic activity against human cancer cell lines
- Muldoon J, Perepelov AV, Shashkov AS, Nazarenko EL, Zubkov VA, Gorshkova RP, Ivanova EP, Gorshkova NM, Knirel YA, Savage AV*// *Nat'l Univ Ireland, Univ Coll Galway, Dept Chem, Univ Rd, Galway, Rep Ireland
Carbohydr Res 2003 **338** (5) 459
 Structure of an acidic polysaccharide from the marine bacterium *Pseudoalteromonas flavipulchra* NCIMB 2033(T)
- Na K, Shin D, Yun K, Park KH, Lee KC*// *Sung Kyun Kwan Univ, Coll Pharm, 300 Chonchon dong, Suwon 440746, South Korea
Biotechnol Lett 2003 **25** (5) 381
 Conjugation of heparin into carboxylated pullulan derivatives as an extracellular matrix for endothelial cell culture
- Rauh JS, Cuddihy JA, Falgout RN, Marquette ML// Midland Res Labs Inc, Lenexa, Ks 66201, USA
Int Sugar J 2003 **105** (1251) 100
 Dextran test method provides versatility for sugar factory process monitoring
- Rimada PS, Abraham AG*// *Ctr Invest & Desarrollo Criotecnol Alimentos, 47 & 116, AR-1900 La Plata, Argentina
Lait 2003 **83** (1) 79
 Comparative study of different methodologies to determine the exopolysaccharide produced by kefir grains in milk and whey
- Santhiya D, Subramanian S*, Natarajan KA// *Indian Inst Sci, Dept Met, IN-560012 Bangalore, India
J Colloid Interface Sci 2002 **256** (2) 237
 Surface chemical studies on sphalerite and galena using extracellular polysaccharides isolated from *Bacillus polymyxa*
- Tang YJ, Zhong JJ*// *East China Univ Sci & Technol, State Key Lab Bio-reactor Engr, 130 Meilong Rd, CN-200237 Shanghai, Peoples Rep China
Enzyme Microb Technol 2003 **32** (3-4) 478
 Role of oxygen supply in submerged fermentation of *Ganoderma lucidum* for production of *Ganoderma* polysaccharide and ganoderic acid
- Trujillo-Roldan MA, Moreno S, Segura D, Galindo E, Espin G*// *Univ Nacl Autonoma Mexico, Inst Biotecnol, Dept Mol Microbiol, Apdo Postal 510-3, MX-62250 Cuernavaca, Morelos, Mexico
Appl Microbiol Biotechnol 2003 **60** (6) 733
 Alginate production by an *Azotobacter vinelandii* mutant unable to produce alginate lyase
- Vargas-García MC, Lopez MJ, Elorrieta MA, Suarez F, Moreno J// Univ Almeria, Escuela Politecn Super, Dept Biol Aplicada, Unidad Microbiol, Almeria, Spain
J Appl Microbiol 2003 **94** (3) 388
 Properties of polysaccharide produced by *Azotobacter vinelandii* cultured on 4-hydroxybenzoic acid
- Vicenzi E, Gatti A, Ghezzi S, Oreste P, Zoppetti G, Poli G// DIBIT, Labs P2-P3, via Olgettina 58, IT-20132 Milan, Italy
AIDS 2003 **17** (2) 177
 Broad spectrum inhibition of HIV-1 infection by sulfated K5 *Escherichia coli* polysaccharide derivatives
- Yuan GL, Kuramoto N*// *Yamagata Univ, Grad Sch Sci & Engr, Grad Program Human Sensing & Funct Sensor Engr, 4-3-16 Jonan, Yonezawa, Yamagata 992 851, Japan
Macromolecules 2002 **35** (26) 9773
 Water-process able chiral polyaniline derivatives doped and intertwined with dextran sulfate: Synthesis and chiroptical properties
- Zhang JJ, Kong FZ*// *Acad Sinica, Eoenviromn Sci Res Ctr, POB 2871, CN-100085 Beijing, Peoples Rep China
Tetrahedron Lett 2003 **44** (9) 1839
 An efficient synthesis of a hexasaccharide: The repeating unit of the exopolysaccharide from *Cryptococcus neoformans* serovar A
- Zhang M, Zhang L*, Cheung PCK// *Wuhan Univ, Dept Chem, CN-430072 Wuhan, Peoples Rep China
Biopolymers 2003 **68** (2) 150
 Molecular mass and chain conformation of carboxymethylated derivatives of β -glucan from sclerotia of *Pleurotus tuber-regium*

12. Polysaccharides - Plant

- Biswas B, Phillips GO*// *Research Transfer Ltd, 2 Plymouth Dr, Radyr, Cardiff CF15 8BL, Wales
Food Hydrocolloid 2003 **17** (2) 177
 Computation of specific optical rotation from carbohydrate composition of exudate gums *Acacia senegal* and *Acacia seyal*
- Buchanan CM, Buchanan NL, Debenham JS, Gatenholm P, Jacobsson M, Shelton MC, Watterson TL, Wood MD// Eastman Chem Company, Res Lab, PO Box 1972, Kingsport, Tn 37662, USA
Carbohydr Polym 2003 **52** (4) 345
 Preparation and characterization of arabinoxylan esters and arabinoxylan ester/cellulose ester polymer blends
- Byars JA, Carriere CJ, Inglett GE// USDA/ARS, Cereal Prod & Food Sci Res Unit, Nat Ctr Agr Utilization Res, 1815 Nth University St, Peoria IL 61604, USA
Carbohydr Polym 2003 **52** (3) 243
 Constitutive modeling of β -glucan/amylopectin blends
- Carin M, Barthes-Biesel D, Edwards-Levy F, Postel C, Andrei DC// Univ Bretagne Sud, Ctr Rech, BP 92116, FR-56321 Lorient, France
Biotechnol Bioeng 2003 **82** (2) 207
 Compression of biocompatible liquid-filled HSA-alginate capsules: Determination of the membrane mechanical properties
- Cheng Y, Prud'homme RK, Chik J, Rau DC// Princeton Univ, Dept Chem Engr, Princeton, NJ 08544, USA
Macromolecules 2002 **35** (27) 10155
 Measurement of forces between galactomannan polymer chains: Effect of hydrogen bonding
- Cheng Y, Brown KM, Prud'homme RK// Merck Res Labs, WP78-304, West Point, Pa 19486, USA
Int J Biol Macromol 2002 **31** (1-3) 29
 Preparation and characterization of molecular weight fractions of guar galactomannans using acid and enzymatic hydrolysis
- Colleoni-Sirghie M, Kovalenko IV, Briggs JL, Fulton B, White PJ*// *Iowa State Univ, Dept Food Sci & Human Nutr, Food Sci Bldg, Ames, Ia 50011, USA
Carbohydr Polym 2003 **52** (4) 439
 Rheological and molecular properties of water soluble (1,3)(1,4)- β -D-glucans from high- β -glucan and traditional oat lines
- Dahmani M, Ramzi M, Rochas C, Guenet JM*// *Inst Charles Sadron, CNRS UPR 22, 6 rue Boussingault, FR-67083 Strasbourg, France
Int J Biol Macromol 2002 **31** (4-5) 147
 Thermoreversible gelation in aqueous binary solvents of chemically modified agarose
- Duchesne I, Takabe K, Daniel G// Swedish Univ Agr Sci, Dept Wood Sci, Wood Ultrastruct Res Ctr, POB 70 08, SE-75007 Uppsala, Sweden
Holzforchung 2003 **57** (1) 62
 Ultrastructural localisation of glucomannan in Kraft pulp fibres
- El Kamel AH, Al Gohary OMN, Hosny EA// King Saud Univ, Coll Pharm, Dept Pharmaceut, POB 22452, SA-11495 Riyadh, Saudi Arabia
J Microencapsul 2003 **20** (2) 211
 Alginate-diltiazem hydrochloride beads: Optimization of formulation factors, *in vitro* and *in vivo* availability
- Falshaw R, Bixler HJ, Johndro K// Industrial Res Ltd, Gracefield Res Ctr, PO Box 31-310, Lower Hutt, New Zealand
Food Hydrocolloid 2003 **17** (2) 129
 Structure and performance of commercial κ -2 carrageenan extracts. Part III. Structure analysis and performance in two dairy applications of extracts from the New Zealand red seaweed, *Gigartina atropurpurea*
- Grondahl M, Teleman A, Gatenholm P*// *Chalmers Univ Technol, Dept Mat & Surf Chem, Biopolym Technol, SE-412 96 Goteborg, Sweden
Carbohydr Polym 2003 **52** (4) 359
 Effect of acetylation on the material properties of glucuronoxylan from aspen wood
- Han J, Zhong JJ*// *East China Univ Sci & Technol, State Key Lab Bioreactor Engr, 130 Meilong Rd, CN-200237 Shanghai, Peoples Rep China
Enzyme Microb Technol 2003 **32** (3-4) 498
 Effects of oxygen partial pressure on cell growth and ginsenoside and polysaccharide production in high density cell cultures of *Panax notoginseng*
- Hernandez-Carmona G, McHugh DJ, Arvizu-Higuera DL, Rodriguez-Montesinos YE// Interdisciplinario Ciencias Marinas, AP Postal 592, La Paz BCS, Mexico
J Appl Phycol 2002 **14** (6) 445
 Pilot plant scale extraction of alginates from *Macrocystis pyrifera*. IV. Conversion of alginic acid to sodium alginate, drying and milling
- Hirano E, Saito H, Ito Y, Ishige K, Edagawa Y, Shimizu N, Takeda T, Narui T, Shibara S, Abe K*// *3-4-10 Hiroo, Shibuya ku, Tokyo 150 0012, Japan

- Brain Res* 2003 **963** (1-2) 307
 PB-2, a polysaccharide fraction from lichen *Flavoparmelia baltimorensis*, peripherally promotes the induction of long-term potentiation in the rat dentate gyrus *in vivo*
- Hori R, Sugiyama J*// *Kyoto Univ, Wood Res Inst, Uji, Kyoto 611-0011, Japan
Carbohydr Polym 2003 **52** (4) 449
 A combined FT-IR microscopy and principal component analysis on softwood cell walls
- Iagher F, Reicher F, Ganter JLMS*// *Univ Fed Parana, Dept Biochem, CP 19046, BR-81531-990 Curitiba, Parana, Brazil
Int J Biol Macromol 2002 **31** (1-3) 9
 Structural and rheological properties of polysaccharides from mango (*Mangifera indica* L.) pulp
- Iijima M, Hatakeyama T*, Nakamura K, Hatakeyama H// *Otsuma Womens Univ, 12 Sanban cho, Chiyoda ku, Tokyo 102 8357, Japan
J Therm Anal Calorim 2002 **70** (3) 807
 Thermomechanical analysis of calcium alginate hydrogels in water
- Illarionova EL, Kalinina TN, Khokhlova VA, Vainburg VM, Chufarovskaya TI, Shiyagina LM// State Univ Technol & Design, St Petersburg, Russia
Russ J Appl Chem-Eng Tr 2002 **75** (9) 1535
 Alginate fibers with controllable calcium content
- Kara S, Tamerler C, Bermek H, Pekcan O*// *Istanbul Tech Univ, Dept Mol Biol & Genet, TR-8026 Istanbul, Turkey
Int J Biol Macromol 2002 **31** (4-5) 177
 Cation effects on sol-gel and gel-sol phase transitions of κ -carrageenan-water system
- Karppinen S, Myllymaki O, Forssell P, Poutanen K// VTT Biotechnol, POB 1500, FI-02044 Espoo, Finland
Cereal Chem 2003 **80** (2) 168
 Fructan content of rye and rye products
- Katsube T, Yamasaki Y, Iwamoto M, Oka S// Shimane Inst Ind Technol, 1 Hokuryo, Matsue, Shimane 690 0816, Japan
Food Sci Technol Res 2003 **9** (1) 25
 Hyaluronidase-inhibiting polysaccharide isolated and purified from hot water extract of sporophyll of *Undaria pinnatifida*
- Kim JH, Lee SB, Kim SJ, Lee YM*// *Hanyang Univ, Coll Engr, Sch Chem Engr, Sundong gu, Seoul 133791, South Korea
Polymer 2002 **43** (26) 7549
 Rapid temperature/pH response of porous alginate-g-poly (*N*-isopropylacrylamide) hydrogels
- Lai HL, Abu Khalil A, Craig DQM*// *Queen's Univ Belfast, Sch Pharm, 97 Lisburn Rd, Belfast BT9 7BL, Northern Ireland
Int J Pharm 2003 **251** (1-2) 175
 The preparation and characterisation of drug-loaded alginate and chitosan sponges
- Lee DW, Hwang SJ, Park JB, Park HJ*// *Korea Univ, Grad Sch Biotechnol, Seoul 136701, South Korea
J Microencapsul 2003 **20** (2) 179
 Preparation and release characteristics of polymer-coated and blended alginate microspheres
- Liu XD, Bao DC, Xue WM, Xiong Y, Yu WT, Yu XJ, Ma XJ*, Yuan Q// *Chinese Acad Sci, Dalian Inst Chem Phys, Lab Biomed Mat Engr, CN-116023 Dalian, Peoples Rep China
J Appl Polym Sci 2003 **87** (5) 848
 Preparation of uniform calcium alginate gel beads by membrane emulsification coupled with internal gelation
- Liu XX, Qian LY, Shu T, Tong Z*// *Sth China Univ Technol, Res Inst Mat Sci, CN-510640 Guangzhou, Peoples Rep China
Polymer 2003 **44** (2) 407
 Rheology characterization of sol-gel transition in aqueous alginate solutions induced by calcium cations through *in situ* release
- Lucinda-Silva RM, Evangelista RC*// *UNESP, Fac Ciencias Farmaceut, Programa Pos-Grad Ciencias Farmaceut, Rod Araraquara Jau km 01, BR-14801- 902 Sao Paulo, Brazil
J Microencapsul 2003 **20** (2) 145
 Microspheres of alginate-chitosan containing isoniazid
- Mazumder S, Ghosal PK, Pujol CA, Carlucci MJ, Damonte EB, Ray B*// *Univ Rouen, SCUEOR, CCME, UMR CNRS 6037, FR-76821 Mont St Aignan, France
Int J Biol Macromol 2002 **31** (1-3) 87
 Isolation, chemical investigation and antiviral activity of polysaccharides from *Gracilaria corticata* (Gracilariaceae, Rhodophyta)
- Miyazaki S, Endo K, Kawasaki N, Kubo W, Watanabe H, Attwood D*// *Univ Manchester, Sch Pharm & Pharmaceut Sci, Manchester M13 9PL, England
Drug Dev Ind Pharm 2003 **29** (2) 113

Oral sustained delivery of paracetamol from *in situ* gelling xyloglucan formulations

Morra M, Cassinelli C// Nobile Bio Ricerche, Str S Rocco 32, IT-14018 Villafranca d'Asti, Italy

Plasma Polym 2002 **7** (2) 89

Cell adhesion micropatterning by plasma treatment of alginate coated surfaces

Naio S, Hatakeyama T*, Hatakeyama H// *Otsuma Womens Univ, 1-2 Sanban cho, Chiyoda ku, Tokyo 102 8357, Japan

J Therm Anal Calorim 2002 **70** (3) 841

Phase transition of locust bean gum-, tara gum- and guar gum-water systems

Oosterveld A, Harmsen JS, Voragen AGJ, Schols HA*// *Wageningen Univ, Dept Agrotechnol & Food Sci, Lab Food Chem, PO Box 8129, NL-6700 EV Wageningen, The Netherlands

Carbohydr Polym 2003 **52** (3) 285

Extraction and characterization of polysaccharides from green and roasted *Coffea arabica* beans

Orive G, Hernandez RM, Gascon AR, Igartua M, Pedraz JL*// *Univ Basque Country, Fac Pharm, Lab Pharm & Pharmaceut Technol, Paseo Univ 7, ES-010006 Vitoria-Gasteiz, Spain

Eur J Pharmaceut Sci 2003 **18** (1) 23

Survival of different cell lines in alginate-agarose microcapsules

Patmore JV, Goff HD*, Fernandes S// *Univ Guelph, Dept Food Sci, Guelph Ontario, Canada N1G 2W1

Food Hydrocolloid 2003 **17** (2) 161

Cryo-gelation of galactomannans in ice cream model systems

Pereira MS, Melo FR, Mourao PAS*// *Hosp Univ Clementino Fraga Filho, Lab Tecido Conjunt, Caixa Postal 68041, BR-21941-590 Rio de Janeiro, Brazil

Glycobiology 2002 **12** (10) 573

Is there a correlation between structure and anticoagulant action sulfated galactans and sulfated fucans?

Roncero B, Torres AL, Colom JF, Vidal T// Univ Politecn Catalunya, Colom 9-11, ES-08222 Terrassa, Spain

Afinidad 2002 **59** (500) 371

TCF bleaching of *Eucalyptus* pulps. The use of xylanases (French, English Abstract)

Ross-Murphy SB, Wang QI, Ellis PR// King's Coll London, Div Life Sci, Biopolym Group, Franklin-Wilkins Bldg, 150 Stamford St, London SE1 9NN, England

Carbohydr Polym 2003 **52** (3) 335

Re: Onweluzo JC, Ramesh HP & Tharanathan RN (2002). Characterization of free sugars and xyloglucan-type polysaccharides of two tropical legumes. *Carbohydrate Polymers*, **47**, 253-257 (Letter)

Sakai T, Kimura H, Kojima K, Shimanaka K, Ikai K, Kato I// Takara Shuzo Co Ltd, Biomed Grp, Zaifu cho 82-4, Hirosaki, Aomori 036 8216, Japan

Mar Biotechnol 2003 **5** (1) 70

Marine bacterial sulfated fucoglycuronomannan (SFGM) lyase digests brown algal SFGM into trisaccharides

Shan JJ, Ke W, Deng JE, Tian GY*// *Chinese Acad Sci, Shanghai Inst Organ Chem, State Key Lab Bioorgan & Nat Prod Chem, 345 Lingling Lu, Shanghai 200 032, Peoples Rep China

Chin J Chem 2003 **21** (1) 87

Structural elucidation and antitumor activity of polysaccharide AMP-1 from *Atractylodes macrocephala* K

Sims IM, Furneaux RH// Industrial Res Ltd, PO Box 31-310, Lower Hutt, New Zealand

Carbohydr Polym 2003 **52** (4) 423

Structure of the exudate gum from *Meryta sinclairii*

Subramanian M, Chintalwar GJ, Chattopadhyay S*// *Bhabha Atom Res Ctr, Div Bioorgan, IN-400085 Bombay, India

Indian J Biochem Biophys 2003 **40** (1) 22

Radioprotective property of polysaccharide in *Tinospora cordifolia*

Thimma RT, Tammishetti S*// *Indian Inst Chem Technol, Organ Coatings & Polymers Div, IN-500007 Hyderabad, India

J Microencapsul 2003 **20** (2) 203

Study of complex coacervation of gelatin with sodium carboxymethyl guar gum: Microencapsulation of clove oil and sulphamethoxazole

Tomasic V, Tomasic A, Filipovic-Vincekovic N*// *Rudjer Boskovic Inst, Dept Chem Phys, Bijenicka 54, HR-10000 Zagreb, Croatia

J Colloid Interface Sci 2002 **256** (2) 462

Interactions between dodecylammonium chloride and L-carrageenan

Wang QJ, Yu H, Zong J, He PG, Fang YZ*// *East China Normal Univ, Dept Chem, CN-200062 Shanghai, Peoples Rep China

J Pharmaceut Biomed Anal 2003 **31** (3) 473

Determination of the composition of Chinese *Ligustrum lucidum* polysaccharide by capillary zone electrophoresis with amperometric detection

Wietholter N, Graessner B, Mierau M, Willats WGT, Knox JP, Moerschbacher

BM*// *Univ Munster, Inst Biochem & Biotechnol Pflanzen, Hindenburgpl 55, DE-48143 Munster, Germany

Carbohydr Res 2003 **338** (5) 423

Isolation and characterisation of the homogalacturonan from type II cell walls of the commelinoid monocot wheat using HF-solvolysis

Yang J, Du Y*, Wen Y, Li T, Hu L// *Wuhan Univ, Dept Environm Sci, CN-430072 Wuhan, Hubei, Peoples Rep China

Carbohydr Polym 2003 **52** (4) 397

Sulfation of Chinese lacquer polysaccharides in different solvents

Yang J, Du Y*// *Address as above

Carbohydr Polym 2003 **52** (4) 405

Chemical modification, characterization and bioactivity of Chinese lacquer polysaccharides from lac tree *Rhus vernicifera* against leukopenia induced by cyclophosphamide

Yang JH, Du Y*, Huang RH, Wan YY, Li TY*// *Address as above

Int J Biol Macromol 2002 **31** (1-3) 55

Chemical modification, characterization and structural-anticoagulant activity relationships of Chinese lacquer polysaccharides

Zhu W, Ooi VEC*, Chan PKS, Ang PO// *Chinese Univ, Dept Biol, Hong Kong, Peoples Rep China

Biochem Cell Biol 2003 **81** (1) 25

Isolation and characterization of a sulfated polysaccharide from the brown alga *Sargassum patens* and determination of its anti-herpes activity

13. Polysaccharides - Other

Alkred JA, Mrestani Y*, Stroehl D, Wartewig S, Neubert R// *Univ Halle Wittenberg, Inst Pharmaceut & Biopharmaceut, Wolfgang Langenbeck Str 4, DE-06120 Halle/S, Germany

J Pharmaceut Biomed Anal 2003 **31** (3) 545

Characterization of enzymatically digested hyaluronic acid using NMR, Raman, IR, and UV-Vis spectroscopies

Azzam T, Raskin A, Makovitzki A, Brem H, Vierling P, Lineal M, Domb AJ*// *Hebrew Univ Jerusalem, Fac Med, Sch Pharm, Dept Med Chem & Nat Prod, IL-91120 Jerusalem, Israel

Macromolecules 2002 **35** (27) 9947

Cationic polysaccharides for gene delivery

Dudkin VY, Miller JS, Danishefsky SJ// Sloan Kettering Inst Canc Res, Bioorgan Chem Lab, 1275 York Ave, New York, NY 10021, USA

Tetrahedron Lett 2003 **44** (9) 1791

A concise route to the core pentasaccharide of N-linked glycoproteins

Gref R, Rodrigues J, Couvreur P// Univ Paris Sud, Fac Pharm, Sch Pharm, UMR 8612 CNRS, Tour D5, 1er Etage, 5 rue Jean Baptiste Clement, FR-92296 Chatenay Malabry, France

Macromolecules 2002 **35** (27) 9861

Polysaccharides grafted with polyesters: Novel amphiphilic copolymers for biomedical applications

Kuhn AV, Ruttinger HH, Neubert RHH, Raith K*// *Martin-Luther-Univ Halle-Wittenberg, Inst Pharmaceut & Biopharmaceut, Wolfgang-Langenbeck-Str 4, DE-06120 Halle/Saale, Germany

Rapid Commun Mass Spectrom 2003 **17** (6) 576

Identification of hyaluronic acid oligosaccharides by direct coupling of capillary electrophoresis with electrospray ion trap mass spectrometry

Medvedeva SA, Aleksandrova GP, Grishchenko LA, Tyukavkina NA// Russian Acad Sci, Siberian Div, Favorskii Irkutsk Inst Chem, RU-664003 Irkutsk, Russia

Russ J Gen Chem 2002 **72** (9) 1480

Synthesis of iron(II, III)-containing derivatives of arabinogalactan

Mu XH, Tobyn MJ*, Staniforth JN// *Univ Bath, Dept Pharm & Pharmacol, Pharmaceut Technol Group, Bath BA2 7AY, England

Drug Dev Ind Pharm 2003 **29** (1) 19

Influence of physiological variables on the *in vitro* drug-release behavior of a polysaccharide matrix controlled-release system

Orgueira HA, Bartolozzi A, Schell P, Litjens REJN, Palmacci ER, Seeberger PH*// *MIT, Dept Chem, 77 Massachusetts Ave, Cambridge, Ma 02139, USA

Chem-Eur J 2003 **9** (1) 140

Modular synthesis of heparin oligosaccharides

Pan LC, Chien CC*// *Ind Technol Res Inst, Ctr Biomed Engrn, Hsinchu 310, Taiwan

J Biochem Biophys Methods 2003 **55** (1) 87

A novel application of thermo-responsive polymer to affinity precipitation of polysaccharide

Wang LF, Shen SS, Lu SC// Kaohsiung Med Univ, Sch Chem, 100 Shih-Chuan 1st Road, Kaohsiung 807, Taiwan

Carbohydr Polym 2003 **52** (4) 389

Synthesis and characterization of chondroitin sulfate-methacrylate hydrogels