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- Daris Kuakpetoon, Ya-Jane Wang (Arkansas, USA) 1896 Structural characteristics and physicochemical properties of oxidized corn starches varying in amylose content

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- Mohammed Nurul Amin, Akihiro Ishiwata, Yukishige Ito (Saitama, Japan) 1922 Synthesis of asparagine-linked bacillosamine

- Shyam S. Verma, Namrata Dwivedi, Biswajit K. Singh, Rama P. Tripathi (Lucknow, India) 1930 DBU assisted expeditious synthesis of glycosyl dienes via glycosylated β -hydroxy esters

- Caroline Hadad, Céline Damez, Sandrine Bouquillon (Reims, France), Boris Estrine (Reims, France; Compiègne, France), Françoise Hénin, Jacques Muzart (Reims, France;), Isabelle Pezron, Ljepša Komunjer (Compiègne, France) 1938 Neutral pentosides surfactants issued from the butadiene telomerization with pentoses: preparation and amphiphilic properties

- Zhao-Xia Wang, Xiao-Xin Shi, Guo-Rong Chen, Zhi-Hua Ren, Lei Luo, Jing Yan (Shanghai, PR China) 1945 A new synthesis of α -arbutin via Lewis acid catalyzed selective glycosylation of tetra-*O*-benzyl- α - D -glucopyranosyl trichloroacetimidate with hydroquinone

- Chun-Cheng Lin, Mi-Dan Jan (Taipei, Taiwan; Hsinchu, Taiwan), Shiue-Shien Weng (Taipei, Taiwan), Chang-Ching Lin (Taipei, Taiwan; Hsinchu, Taiwan), Chien-Tien Chen (Taipei, Taiwan) 1948 *O*-Isopropylidenation of carbohydrates catalyzed by vanadyl triflate

- Andrew J. Ross, Olga V. Sizova, Andrei V. Nikolaev (Dundee, UK) 1954 Parasite glycoconjugates. Part 16: Synthesis of a disaccharide and phosphorylated di- and tri-saccharides from *Leishmania* lipophosphoglycan

- Jarl Bøgwald, James Hoffman (Tromsø, Norway) 1965 Structural studies of the O-antigenic oligosaccharide from *Vibrio salmonicida* strain C2 isolated from Atlantic cod, *Gadus morhua* L.

- Andrei V. Perepelov (Moscow, Russian Federation), Agnieszka Zabłotni (Łódź, Poland), Alexander S. Shashkov, Yuriy A. Knirel (Moscow, Russian Federation), Zygmunt Sidorczyk (Łódź, Poland) 1969 Structure of the O-polysaccharide of *Proteus mirabilis* CCUG 10705 (OF) containing an amide of D -galacturonic acid with L-alanine

- Bao Yang, Jinshui Wang, Mouming Zhao, Yang Liu, Wei Wang (Guangzhou, People's Republic of China), Yueming Jiang (Guangzhou LeYiJu, People's Republic of China) 1975 Corrigendum to "Identification of polysaccharides from pericarp tissues of litchi (*Litchi chinensis* Sonn.) fruit in relation to their antioxidant activities". [Carbohydr. Res. 341 (2006) 634]

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Rapid Communication

- Charles D. Blundell (Manchester, UK), Michelle A. C. Reed, Michael Overduin (Birmingham, UK), Andrew Almond (Manchester, UK) 1985 NMR spectra of oligosaccharides at ultra-high field (900MHz) have better resolution than expected due to favourable molecular tumbling

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