Bailey Award

The North Central Section of AOCS is requesting written nominations from AOCS members for the 1987 Alton E. Bailey Award. The purpose of the Bailey Award is to recognize research and/or service in the field of oils, fats and waxes.

Past Bailey Award recipients have included: V.C. Mehlenbacher, 1959; R.H. Potts, 1960; J.C. Cowan, 1961; A.R. Baldwin, 1963; T.P. Hilditch, 1965; D. Swern, 1966; W.O. Lundberg, 1967; H.J. Dutton, 1968; H.S. Olcott, 1969; H.E. Carter, 1970; J.F. Mead, 1971; R.T. Holman, 1972; C.M. Gooding, 1973; S.S. Chang, 1974; W.M. Cochran, 1975; Raymond Reiser, 1976; L.A. Goldblatt, 1977; O.S. Privett, 1978; R.O. Feuge, 1979; Frank Norris, 1980; Hans Kaunitz, 1981; Thomas Applewhite, 1982; R.R. Allen, 1983; Cecil Smith, 1984; E.N. Frankel, 1985; E.G. Perkins, 1986.

Please send nominations to:

David C. Tandy
EMI Corp.
3166 Des Plaines Ave.
Des Plaines, IL 60018

The deadline for nominations is Nov. 1, 1986, and notification of the selection will appear in this journal. Presentation of the 1987 Bailey Award is scheduled for February 1987.

Book reviews

Glycolipids, New Comprehensive Biochemistry, Vol. 10, edited by H. Wiegandt, (Elsevier Science Publishing Co., 52 Vanderbilt Ave., New York, NY 10017, 1985, 314 pp., $59.00).

This book contains four chapters: "Glycosphingolipids," by Makita and Taniguchi; "Glycoglycerolipids," by Ishizuka and Yamakawa; "Gangliosides," by Wiegandt; and "Glycophosphopolyprenols," by Hemming. One of the problems in reading and reviewing a book on glycolipids is the effort necessary for a traditional lipid chemist to cope with the nomenclature of the long, complex carbohydrate chains.

Makita and Taniguchi handle the relatively simple neutral and sulfated glycolipids of mammalian origin very nicely by proceeding stepwise through the various families. Each glycolipid is covered in 1-2 paragraphs describing initial isolation, characterization, and either distribution or species or disease states characterized by elevated levels. These authors also tabulate 36 fucolipids of increasing complexity and then venture into the area of glycolipids in invertebrates. Sections are provided on general isolation and characterization of glycolipids, biosynthesis, catabolism, blood group lipids and tumor lipids.

Glycoglycerolipids are reviewed in a somewhat different style, perhaps related to the diversity of structures of this type found in bacteria, plants and animals. Ishizuka and Yamakawa do an admirable job of bringing together this information. Their tables tend to focus on occurrence and, in some cases, fatty acid distribution for the same or similar lipids in different species. Wiegandt, meanwhile, packs an amazing amount of information into the chapter on gangliosides. The average of nine references per page of text for the total volume arises in part from Wiegandt's inclusion of an average of 15 references per page in his chapter. Hemming reviews the role of the polyprenolphosphates in glycosylation reactions.

As the title suggests, this is a comprehensive textbook suitable for a specialized portion of an advanced graduate level course or as an encyclopedic reference source. The chapters are readable and, despite the number of literature citations, are not unduly heavy-going. Structures are largely numbered and restricted to listings in rather long tables rather than being routinely repeated throughout the text. Citations appear largely to end in early 1982. This is a well-organized, well-written and well-edited text which can be strongly recommended to that vanishingly small minority of lipid chemists and biochemists interested in glycolipids.

Lloyd A. Witting

Lipids, Chemistry, Biochemistry, and Nutrition, by James F. Mead, Roslyn B. Alfin-Slater, David R. Howton and George Popjak (Plenum Press, 233 Spring St., New York, NY 10013, 1986, 486 pp., $69.50).

About 10-15 years ago, there was a surplus of good, up-to-date texts on lipids. Those by Florkin and Stotz (1970), Wakil (1970), Kates (1972), Masoro (1968) and Gurr and James (1971, 1980) come immediately to mind. In the interim there have been a number of specialized volumes and review volumes, but the time has come again for a new, general text.

The authors of this book should be well known to all lipid chemists: Mead for his early work on essential fatty acids and radiolabeled fatty acids, and Popjak for his extensive studies on fatty acid and cholesterol biosynthesis. Alfin-Slater might be considered a second-generation lipid textbook author as a protegé of Deuel, who wrote a massive three-volume text (about 3,000 pages and 25,000 references) a generation ago. Mead and Alfin-Slater were among the colleagues of Deuel who, after his death, assisted in the completion of the third volume of that text. An interesting note is that both the third volume of Deuel (1956) and the current text (1986) acknowledge the assistance of Lilla Aftergood.

Of necessity, the traditional group of chapters is included, although not necessarily in traditional sequence or in uniform depth. One finds an eclectic group of chapters based on the diverse interests of four separate authors. This results in novel and refreshing approaches. We have all undoubtedly encountered that traditional

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definition of a lipid: a material soluble in a lipid solvent. Here, for the first time to my knowledge, this definition is followed by a 20-page explanation of the thermodynamics, electrostatic interactions, dielectric constants and London forces involved. Chapters on the chemistry of lipids tend to emphasize physical chemistry. The first chapter on fatty acids, for instance, is largely concerned with dihedral angle, anti and gauche configurations, and cardinal conformations. The first chapter on complex lipids is entitled, "The Amphiphilic Lipids: Structure, Properties, and Conformation."

This text shows considerable strength in the two chapters on "Prostaglandins, Thromboxanes and Prostacyclin" and "Eicosanoids: Leukotrienes and Slow Reacting Substances of Anaphylaxis." Cholesterol biosynthesis is covered in great detail. If this text has a fault, it probably arises from the decision to cover the chemistry, biochemistry and nutrition of lipids within one volume. The nutrition chapters on a purely comparative basis tend to appear slightly weaker than other chapters.

In the preface the authors note that they have been teaching a course on lipids for a number of years to graduate and postdoctoral students in the health sciences at UCLA and have found that there is no current single text suitable for this purpose. This reviewer would concur that the time is right for an up-to-date, well-written, comprehensive text. This book appears to be printed well, clearly illustrated and, by present standards, reasonably priced.

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New books

Directory of Custom Food Processors and Formulators, Delphi Marketing Services, Inc., 400 E. 89 St., New York, NY 10128, 1986, $180.

Food Irradiation: New Perspectives on a Controversial Technology, by Rosanna Mentzer Morrison and Tanya Roberts, National Technical Information Service, 5285 Port Royal Rd., Springfield, VA 22161, $16.95, stock number PB86-1774-74/AS.

Biomass Energy Development, edited by Wayne H. Smith, Plenum Press, 233 Spring St., New York, NY 10013, 1986, 667 pp., $95.

New Products

BLOWDOWN SYSTEM

The Model 757 automatic boiler blowdown control system, introduced by the Uniloc Division of Rosemount Inc., provides on/off control for base-load boilers requiring intermittent blowdown. Bypass on/off blowdown trim control also can be provided for large base-load boilers where the main skimmer blowdown is continuous. Based upon sample-cycle control, the 757's dual range field adjustable solid state timer circuit determines the interval and duration of the blowdown/sample cycle. Contact: Rosemount Inc., 12001 W. 78th St., Eden Prairie, MN 55344.

BACTERIAL SUPPLEMENT

Solmar Corp. has designed a bacterial supplement for treating wastewaters containing a very high lipid content, particularly in systems such as lagoons, activated sludge systems, trickling filters and oxidation ditches. It is formulated for wastewaters with high loadings of animal fats, fish and vegetable oils, light weight mineral oils and many petrochemical products. Contact: R.B. Grubbs, Solmar Corp., 625 W. Katella Ave., Suite 5, Orange, CA 92667.

SPECTROMETER

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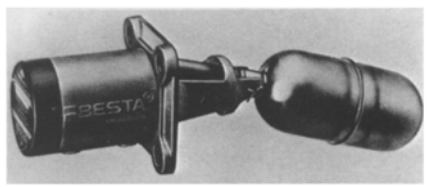
GAS CHROMATOGRAPH

A process gas chromatograph from the Foxboro Co. has an operator interface and the capability to network with IBM personal computers. Designed to continuously analyze, measure and report component concentrations in process streams, the Model 931C includes a control panel with a 4 × 40 character display; large tactile keyboard; menu-driven software; and modular design featuring EEPROM memory, automatic restart and customer-selectable options. Contact: D.L. Fowler, The Foxboro Co., Corporate Communications, Foxboro, MA 02035.



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