
Meetings

Tentative program set



A tentative program of 55 technical sessions on approximately 40 subjects has been proposed by Technical Program Chairman Timothy L. Mounts for the 74th annual meeting of the AOCS to be held May 8-12, 1983, at the Marriott Hotel in Chicago.

The program would provide time for presentation of more than 300 technical papers.

Tentative topics, by general category, are:

Analytical: Argentation Applications in Lipid Research; Developments in Mass Spectrometry; Crystal Structure and Identification; Lipid Methodology.

Biochemistry: Plant Lipids; Prostaglandins; Pharmacological Role of Lipids; Membrane Lipids; Fatty Acid Metabolism; Enzymatic Reactions to Flavor Deterioration.

Chemistry: Chemical Synthesis and Autoxidation.

Emulsifiers and Detergents: Surface Chemistry; Analysis in the Detergent Industry; Emulsions; Consumer Use Aspects; General.

Industrial: Industrial Crops and Biomass; Operating Expertise in Oil Processing; Hydrogenation; Ralph H. Potts Memorial Symposium on Industrial Fatty Acids; Applications of Supercritical Fluids; Commodity Oil Markets; Flavor Stability; Packaging.

Fats and Oils Applications: Tall Oil; Petrochemical Alternatives from Fats; Animal Fats; Lecithin.

Proteins: Potential New Protein Sources; Effect of Plant and Animal Protein on Lipid Metabolism; Protein Functionality; Determination of Plant Proteins in Foods; Antinutritional Factors in Plant Protein Sources; Extrusions and Texturization of Plant Proteins; General.

Safety and Engineering: Oilseed Processing 1983; Plant Safety (symposium/round table).

Environmental.

Nutrition and Health.

Persons who wish to present papers during the meeting should submit abstracts before Nov. 1, 1982, to the technical program chairman (see the Call for Abstracts following this article). Sessions will be added to accommodate volunteer papers that do not fit into any of the topics listed above.

New perspectives on heart disease

The following report on the Sixth International Symposium for Atherosclerosis was prepared for JAOCS by Fred A. Kummerow. Dr. Kummerow is a professor of food chem-

istry and food science at the University of Illinois and has been a member of the AOCS since 1945. The symposium was held June 13-17, 1982, in Berlin, Germany.

Some new perspectives on coronary heart disease (CHD) were presented to 1,800 researchers from 22 nations at the Sixth International Symposium on Atherosclerosis at plenary, workshop and poster sessions during a four-day meeting in Berlin. These perspectives involved the concept that some multiple of "risk factors" such as smoking, lack of exercise, hypertension, genetics and a high caloric diet may be more important than a single risk factor such as a high plasma cholesterol level; also, that a rapid development of macrophages into dead cells in the intima may be more important to lipid accumulation in the coronary arteries than high plasma lipid levels.

An introductory overview of the symposium was held on Sunday, June 13. Dr. A.M. Gotto, chairman of the Department of Medicine at Baylor College of Medicine in Houston, Texas, provided a comprehensive background to the composition and function of plasma lipoproteins. He pointed out that the plasma lipoproteins are complexes of lipid (fat) and protein which transport the plasma (serum) lipids in a stable, soluble form. They contain a core of neutral lipid, cholesteryl ester and triglyceride (fat) and a surface coat of protein, phospholipid and cholesterol.

Dr. Gotto stated that there are five major types of plasma lipoproteins. The largest are the chylomicrons, which are made in the intestinal wall. The next largest are the very low density lipoproteins (VLDL) which are made in the liver and are broken down (catabolized) into low density lipoproteins (LDL) through an intermediate density lipoprotein (IDL). The high density lipoproteins (HDL) are smaller than LDL and are subdivided into HDL₂ and HDL₃ lipoproteins. The apoproteins (the protein portion) in the five lipoprotein fractions have been further fractionated into apo-AI, -AII, -AIII, -AIV, -B48, -B100, -CI, -CII, -CIII and -D, and E-2, E-3, E-4.

According to Dr. W.B. Kannel, chairman of the Department of Preventive Medicine and Epidemiology at Boston University Medical Center, the serum lipoproteins are considered the centerpieces to CHD because they are believed to furnish the cholesterol and cholesteryl esters which gradually accumulate in the arterial wall during "aging." He stated that cholesterol accumulates in the involved areas, but at present no one knows by what mechanism it accumulates in the intima of the coronary arteries. R. Ross, of the School of Medicine, University of Washington in Seattle, believes that the LDL lipoproteins in the plasma (blood) infiltrate through gaps in the endothelial layer (next to the lumen) and gradually accumulate and thicken the intimal layer of the arterial wall.

The character of the apoprotein seems significant in the accumulation of cholesterol. For example, Dr. R. Mahley of the Gladstone Foundation in San Francisco found that patients with a type III hyperlipoproteinemia possessed an apoE-2 which was structured differently from normal apoE-2 apoprotein in the sequence of amino acid in position 158; arginine replaced cysteine in this position. Dr. Gotto noted a similar change in apoE in subjects fed

six egg yolks/day. Whether an increase in dietary cysteine intake by the addition of egg whites or by the use of whole eggs would negate such a change was not considered.

Lt. Col. G.D. Cowan of the Royal Marine Corps and Queen Elizabeth Hospital of London, England, pointed to the value of exercise as a deterrent of CHD. He found that the enlisted men in the British Army suffered twice the CHD rate of the officers, and he credited the officers as taking part in more physical activity than the enlisted men. He recommended a daily 30-minute walk and 30 lengths in a pool as sufficient to staying fit. Everyone agreed that less cigarette smoking would lower the rate of CHD more than would the elimination of any other risk factor. Dr. M.F. Oliver of the Department of Cardiology, Royal Infirmary, Edinburgh, Scotland, stated that drug therapy as a means of lowering plasma cholesterol, is undesirable. A drug may interfere with cholesterol synthesis in the liver but may lower cholesterol excretion, or vice versa. Diet control is also difficult since high-fat, high-caloric (sugar) diets are pleasant to eat. Dr. G. Schlierf of the Department of Medicine at the University of Heidelberg, Heidelberg, West Germany, stated that if HDL lipoprotein levels are high, a high-fat diet is not a risk factor.

The efficacy of drug therapy was discussed by Dr. C.J. Glueck of the University of Cincinnati College of Medicine, Cincinnati, Ohio, in terms of its influence on plasma HDL and LDL lipoprotein levels. Dr. Glueck stated that the drugs probucol and cholestyramine enhanced removal of LDL lipoprotein but had little (cholestyramine) or a negative (probucol) effect on HDL lipoprotein. Nicotinic acid and gemfibrozil reduced VLDL and elevated HDL, with the largest increase in HDL on gemfibrozil. Oxandrolone, stanazolol and probucol decreased HDL levels by reducing synthesis (probucol) or increasing catabolism (oxandrolone, stanazolol). He pointed out that, after 25 years of research, it still is not unequivocally known whether a reduction in plasma LDL lipoprotein levels will reduce CHD, but pointed to the Oslo study as strong positive evidence.

Dr. Geoffrey Rose of the London School of Hygiene and Tropical Medicine stated that 90% of CHD occurs at plasma cholesterol levels below 310 mg % and that hypercholesterolemia (hereditary high cholesterol levels) is responsible for less than 1% of CHD. Yet anyone with plasma cholesterol levels over 310 mg % is considered a "high risk" patient and physicians try to lower such a level by either drug treatment or a low cholesterol diet or both. However, Dr. Rose pointed out that if plasma cholesterol is considered a single high risk factor and if 90% of CHD occurs below 310 mg %, a reduction of a single risk factor such as plasma cholesterol to below 310 mg % does not grant immunity from CHD.

Studies of coronary artery tissue with the aid of electron microscopy and studies of the isolated cells grown in tissue culture have helped to characterize the changes in arterial tissue which result in atherosclerosis. Dr. H. Stary, Louisiana Medical School, New Orleans, reported that the aortas of 9-year-old children contained macrophages and the aortas of 16-year-old children contained lipid-laden streaks. Macrophages have only a short life span and dead macrophages are found in great abundance in fibrous plaques. Dr. S. Fowler, University of South Carolina Medical School in Columbia, South Carolina, found that foam cells are

always present in atherosclerotic lesions and that macrophages may stimulate their formation.

Both in vitro and in vivo studies on the coronary arterial wall will no doubt continue. The pace of advancement will largely depend on funding. Dr. Gotto pointed out that, in constant dollars, an increase in heart research funding has not taken place since 1969. He stated that only 3% of the funding of heart research came from the private sector and that this percentage is not likely to increase. The Seventh International Symposium on Atherosclerosis is scheduled for Oct. 6-10, 1985, in Melbourne, Australia. It is possible that the role of dietary cholesterol in the development of atherosclerosis will be clarified before 1985, and that the data supplied through basic research can be applied to clinical practice.

Lipids analysis short course program

The technical program has been announced for the AOCS Short Course on Analysis of Lipids and Lipoproteins to be held Nov. 7-10, 1982, in Dundee, Illinois.

A 12-member faculty will cover the following topics:

Isolation and Purification of Lipids from Plants and Animal Tissue and Fluids

Separation of Phospholipids by LC, TLC and HPLC

Prostaglandin Analysis by Radioimmunoassay and Chromatography

Separation of Neutral Lipids by LC, GLC, HPLC, and TLC and HPTLC

Separation of Complex Lipids: Gangliosides, Galactoside and Sphingolipids

Lipid Derivatives for Chromatography and Mass Spectrometry

Basic MS for Lipid Structure

Lipid Analysis by GC/MS

Structure Determination by Chemical and Physical Means

High Resolution NMR—Proton, ¹³C, Phosphorus

Pulsed NMR

Separation of Nitrogen-Containing Long-Chain Chemicals

Analysis of Surface-Active Agents by Chemical Methodology and Chromatography

Use of Volatile Compounds in Assessing Fat and Oil Quality

Lipoproteins: Chromatographic Methods, Electrophoretic Methods, Ultracentrifugal Methodology, Ultramicro CHN Analysis, and Use of Small Computers for Analyzing Data.

Chairman for the short course is Dr. E.G. Perkins of the University of Illinois. Other faculty members will include: H.J. Dutton, The Hormel Institute; C. Edelstein, University of Chicago; G. Fleiss, University of Chicago; H.W. Jackson, Kraft Inc.; P.V. Johnston, University of Illinois; F.T. Lindgren, University of California—Berkeley; J.H. Mellema, Kraft Inc.; L.D. Metcalfe, Armak Co.; T. Schmidt, BASF Wyandotte; D. Weisleder, USDA Northern Regional Research Center; and L.A. Witting, Supelco Inc.

The registration fee of \$350 includes three nights' single occupancy lodging at the Chateau Louise, where the short

course will be held, three continental breakfasts, two receptions, and a copy of the proceedings to be published after the short course is held. For double-occupancy, the registration fee is \$275. Chicago area residents who plan to commute can register for \$200. A \$25 late charge is applicable to all registrations received after Oct. 7, 1982.

Registration forms and further details are available from: Short Course Coordinator, AOCS, 508 S. Sixth St., Champaign, IL 61820 USA.

Spanish meeting Oct. 6-8

The 17th assembly of the members of the Instituto de la Grasa y Sus Derivados will be held Oct. 6-8, 1982, in Seville, Spain.

Topics to be discussed will include labeling and denaturation of oils, wastewater from the olive oil industry and fertilization; vegetable oils in motors and energy; olive oil extraction products; sulfur olive oil, and grape seed oil.

Further information is available from The Instituto de La Grasa y Sus Derivados, Avenida Padre Gracia Tejero 4 (Heliopolis), Apartado 1078, Sevilla 12, Spain.

Jojoba conference this fall

The Fifth International Conference on Jojoba and Its Uses, sponsored by the University of Arizona and the International Jojoba Council (Consejo Internacional de la Jojoba), will be held Oct. 11-15, 1982, at the Marriott Hotel, Tucson, Arizona.

The conference will include an overview of cultivated jojoba in the world. During the first day, technical papers on chemistry, toxicity, nutrition and reproduction will be presented. There will also be a discussion of special prob-

lems and concerns of small plantation owners. The Tuesday and Wednesday sessions will focus on cultural practices, plantation costs and financing, genetic material, yields, harvesting techniques, process and marketing, and end products. There will be a field tour of plantations in the Casa Grande area and a visit to a commercial processing plant on Thursday.

For more information, contact the Conference Department, Division of Continuing Education, University of Arizona, 1717 E. Speedway, Suite 1201, Tucson, Arizona 85719.

1983 Rapeseed meeting announced

The Sixth International Rapeseed Conference is slated for May 16-20, 1983, at the Palais des Congrès in Paris, France.

Organizing the conference are the C.E.T.I.O.M. and the I.N.R.A., in cooperation with the International Rapeseed Research Advisory Group.

Proposed topics include genetics and breeding, cultivation techniques, crop protection, technology and marketing. There will be simultaneous translation into French, English and German during the sessions. Technical and scenic tours will be held following the conference.

Abstracts of reports are due December 31, 1982. The deadline for final texts is May 1, 1983.

For more information, write to Congrès-Services, 1, rue Jules-Lefebvre, F 75009, Paris, France.

Wrong month

The July 1982 *JAOCs* inadvertently published the wrong month for the 1983 Pittsburgh Conference. The correct date is March 7-12, 1983, in Atlantic City, New Jersey.

Industry News

Sherex lab cited

Sherex Chemical Company's research and development laboratory in Dublin, Ohio, has been chosen 1982 Lab of the Year by *Industrial Research & Development*. The facility, which also functions as headquarters for the subsidiary of Schering AG, West Germany, was selected as the laboratory most representative of ideals and standards in esthetics, efficiency and functionalism.

Architects for the project were Trott & Bean Associates of Columbus, Ohio, with consultation by Earl Wall Assoc., La Jolla, CA. In the one-building center, R & D occupies one wing and administration the other, with an atrium in between for reception, board room, and dining and conference areas. The laboratory itself is designed so that people in different disciplines working together on similar projects are located in a large, modular lab, rather than in a group of smaller labs.

EMI has Canadian affiliate

EMI Corporation has opened an affiliate office in Canada, the EMI Engineering Services Corporation, at 7112 De La Roche, Montreal, Quebec. EMI's principal business is to provide plants and processing systems for the fats and oils industry.

Kirchfeld, Neumunz link

Kirchfeld GmbH of Dusseldorf, Germany, manufacturer and supplier of food processing plants worldwide, has appointed Neumunz Inc. of Leonia, New Jersey, as its exclusive sales representative for U.S., Canada and Mexico.

Technical information and bulletins on Kirchfeld's products are available from Neumunz Inc., PO Box 287, Leonia, NJ 07605.