8:30 232. **Determinants of Plasma Triglycerides and Very Low Density Lipoprotein Cholesterol in the Multiple Risk Factor Intervention Trial (MRFIT) Study**
Lewis H. Kuller,* Arlene Caggiula,* University of Pittsburgh, Pittsburgh, PA; W. McFate Smith, Institutes of Medical Sciences; Norman Lasser, College of Medicine and Dentistry of New Jersey; Stephen Hulley, Stanford University; and Richard Grimm, University of Minnesota

8:50 233. **Contributions of Weight Loss to Changes in Lipoprotein Cholesterol Levels in the Multiple Risk Factor Intervention Trial (MRFIT)**
Norman L. Lasser,* College of Medicine and Dentistry of New Jersey, Newark, NJ; Stephen B. Hulley, Institutes of Medical Sciences; Elizabeth D. Munves, College of Medicine and Dentistry of New Jersey; Jeremiah Stamler, Northwestern University Medical School; and Roger Sherwin, University of Maryland

9:10 234. **Abnormalities of Serum Lipoproteins in Abetalipoproteinemia**
Herbert J. Kayden, New York University School of Medicine, New York, NY

9:40 235. **Normotriglyceridemic Abetalipoproteinemia: A Clinical Syndrome Associated with Abnormal Apolipoprotein B**
Mary J. Malloy,* John P. Kane, D.A. Hardman, University of California, San Francisco, CA; and Kanu B. Dalal, Presbyterian Medical Center, San Francisco, CA

10:00 236. **Type III Hyperlipoproteinemia: Implications for the Roles of Isoapolipoprotein E_3 and Estrogens in Normal Lipoprotein Homeostasis**
William R. Hazzard, University of Washington, Seattle, WA

10:30 237. **The Metabolism of Very Low Density Lipoproteins and Low Density Lipoproteins in Normal and Dyslipoproteinemic Man**
Ernst J. Schaefer,* Loren A. Zech, and H. Bryan Brewer, Jr., National Heart, Lung & Blood Institute, Bethesda, MD

10:50 238. **Oxandrolone Causes Disappearance of ApoE from Very Low Density Lipoprotein in Type V Hyperlipoproteinemia**
Josef R. Patsch,* Tsumotu Hara, and Antonia M. Gotto, Jr., Baylor College of Medicine and Methodist Hospital, Houston, TX

THURSDAY MORNING—MAY 3

SESSION II

GENERAL PAPERS

9:00 a.m.—Fountain Room

Chairperson: **To be announced**

9:00 239. **Detoxification of Zearalenone-Contaminated Corn**
G.A. Bennett,* O.L. Shotwell, and C.W. Hesseltine, Northern Regional Research Laboratory, USDA, Peoria, IL

9:20 240. **A Sensitive Screening Method for Zearalenone in Corn**
Charles E. Holaday, National Peanut Research Laboratory, USDA, Dawson, GA

9:40 241. **Crystallization Behavior of High Erucic Acid Rapeseed Oil**
Kinichi Kawamura, Best Foods, CPC International, Union, NJ

10:00 242. **Synthesis of 7-, 8-, 9-, and 10-oxo-16-Hydroxyhexadecanoic Acids and of 7,16-, 8,16-, 9,16-, 10-16-Dihydroxyhexadecanoic Acids**
A.P. Tullock, National Research Council of Canada, Saskatoon, Canada

10:20 243. **Methanol and Preparative Lipid Chemistry**
B. Ramesh* and C.V. Viswanathan, Lipid Research Lab, Poona, India

10:40 244. **Critical Analysis of Sodium Stearoyl Lactylate by Gas Liquid Chromatography**
Richard R. Suchanec,* Hercules Inc., Wilmington, DE

SESSION CHAIRMEN

Chairman	Session
Ackman, R.G.	Z,FF
Aftergood, L.	M
Alfin-Slater, R.B.	S
Araki, E.	S
Beare-Rogers, J.L.	E
Bell, W.	F,L,Y
Crecelius, A.	B,G
Delmont, B.	AA,GG
Felts, J.	K
Fielding, C.J.	W
Frankel, E.N.	C,I,O
Fujino, Y.	V
Gidez, L.I.	Q
Hara, I.	K
Hashimoto, T.	X
Havel, R.J.	HH
Hayano, S.	N,T
Hayashi, A.	DD
Heilman, J.E.	U
Jensen, R.G.	D
Jungermann, E.	H,N,T
Kane, J.	CC
Kaneda, T.	C,I,O
Kayama, M.	Z,FF
Miki, K.	F
Miwa, T.K.	X,DD
Okahara, M.	H
Privett, O.S.	A,J,P
Sahasrabudhe, M.R.	V
Saito, K.	L
St. Angelo, A.J.	R
Uzzan, A.	EE
Watanabe, S.	R
Wells, P.	E
Yano, W.	A,J,P
Yasuda, K.	L
Zehnder, C.T.	BB

AUTHORS

ABSTRACTS OF PAPERS

1

TECHNIQUES OF LIPID ANALYSIS. O.S. PRIVETT and W.L. ERDAHL, The Hormel Institute, University of Minnesota, 801 16th Ave. NE, Austin, MN 55912.

A 16 mm film is presented showing techniques of lipid analysis and associated methodology in sample handling and extraction. Specialized techniques of thin layer chromatography (TLC) and ozonolysis for detection and analysis are demonstrated. Apparatus and techniques are also demonstrated for the analysis of lipids by liquid chromatography via a flame ionization detector (LC-FID), a new liquid chromatography-mass spectrometry computer system (LC-MS-COM), and direct analysis by chemical ionization mass spectrometry via a novel interface-computer system (IF-CIMS-COM).

2

INTERACTION OF HUMAN PLASMA HIGH DENSITY LIPOPROTEIN HDL_2 (d 1.063–1.21 g/ml) WITH SYNTHETIC PHOSPHOLIPIDS. ELAINE L. GONG, ALEX V. NICHOLS, and TRUDY M. FORTE, Donner Laboratory, Lawrence Berkeley Laboratory, University of California, Berkeley, CA 94720.

Interaction of HDL_2, a major class of high density lipoproteins in human plasma, with sonicates of saturated synthetic phospholipids dihexadecanoyl- ($DiC_{16}PC$), ditetradecanoyl- ($DiC_{14}PC$), didodecanoyl- ($DiC_{12}PC$), didecanoyl- ($DiC_{10}PC$), dioctanoyl- (DiC_8PC), and dihexanoyl- (DiC_6PC) phosphatidyl choline, was evalulated by gradient gel electrophoresis, preparative and analytic ultracentrifugation, and electron microscopy. Incubation of HDL_2 with PC at PC:apolipoprotein HDL_2 ratios (mM:mg) $<1.5:1$ ($DiC_{14}PC$, $DiC_{12}PC$, and $DiC_{10}PC$) and $<2:1$ (DiC_8PC) resulted in marked dissociation of apolipoprotein A-I (apoA-I) from the HDL_2. At higher ratios of the above PC, we observed less dissociated apoA-I and obtained evidence for its incorporation into new complexes. These complexes contained apoA-I and the PC used in the incubation mixtures and had physical-chemical properties similar to model complexes formed during interaction of apoA-I with the corresponding PC. Release of apoA-I was associated with uptake of PC by HDL_2 and resulted in an apparent increase in HDL_2 particle size at low and high ratios for mixtures containing $DiC_{14}PC$, $DiC_{12}PC$, and $DiC_{10}PC$. With DiC_8PC at ratios $\leq 2:1$, there was little change in HDL_2 particle size, although a substantial amount of apoA-I was dissociated. Above the 2:1 ratio, the electrophoretic and ultracentrifugal properties of the HDL_2 changed drastically, indicating extensive redistribution of both lipid and apolipoprotein components. Comparable studies on the interaction of HDL_2 with $DiC_{16}PC$ and DiC_6PC, at both low and high ratios, showed little change in HDL_2 properties. Our results indicate that, under the experimental conditions used, the interaction of HDL_2 with PC which leads to PC uptake, apolipoprotein dissociation, and complexing of apolipoprotein by PC, is strongly dependent on acyl-chain length of the PC.

3

EFFECT OF PHOSPHATIDYL CHOLINE ON THE HEMOLYTIC ACTIVITY OF BILE SALTS. ICHIRO HARA, MITSUYO OKAZAKI, Department of Chemistry, Tokyo Medical and Dental University, Kohnodai, Ichikawashi, Chiba Prefecture, 272, Japan; MAKOTO HAYASHI, and YAKANORI KOBAYASHI, University of Chiba, Japan.

It is well known that bile salts can solubilize many lipid-like matters by forming mixed micelles with them. The purified phosphatidyl choline (PC) (soybean, egg yolk) and synthetic