

Lipoprotein analysis focus of AOCS short courses¹

Two short courses on the "Characterization of Human Hyperlipemias" were held in July at the Lankenau Hospital, Philadelphia, and at the University of Illinois Medical School, Chicago. The focus of the courses was based on lipoprotein analysis, the so-called "typing system" of Fredrickson, Lees and Levy.

The data presented yielded several insights that the clinician must consider in his approach to the patient with coronary heart disease. Although blood cholesterol may provide an easily measured indication of those persons "at risk," it fails to provide the clinical insight needed for useful patient management and, in fact, that not every subject with high cholesterol is at increased risk.

The chemistry of lipids and lipoproteins of human serum was discussed. Essentially all serum lipids are bound to specific apoproteins to form water-soluble lipoprotein complexes which are separable from each other by ultracentrifugal, electrophoretic, chromatographic or chemical (precipitation reactions) methods. Lipoprotein species are referred to as: chylomicrons, very low density lipoproteins, low density lipoproteins and high density lipoproteins.

¹This information was received from Nicholas Pelick, Chairman, AOCS Education Committee.



Left to right: Robert S. Lees, M.I.T.; Basil Rifkind, N.I.H.; William Holmes, Lankenau; Nicholas Pelick, Supelco, Inc.; and Dushan Dvornik, Ayerst.

There are five major categories of hyperlipoproteinemias according to the classification scheme of Fredrickson et al. The two most frequently encountered are the type IV, characterized by increased serum triglycerides and the pre-beta lipoprotein fraction, and the type II, which has an increase in serum cholesterol and the beta lipoprotein fraction.

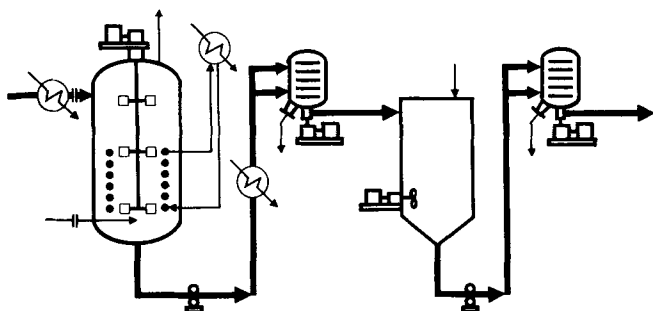
The treatment of elevated serum lipids is usually undertaken because of their association with premature atherosclerosis. It was pointed out that the primary form of therapy for all hyperlipoproteinemia types is dietary. Diet should be continued in patients even if other forms of therapy, such as drugs, are used. A dietary regimen was thoroughly discussed at both short courses by two different lecturers.

A pharmacological approach was described as a means of reducing lipid levels by inhibiting biosynthesis, or by interfering with absorption properties. Old and new compounds (drugs) representing different classes of antihyperlipidemic agents were also discussed.

Live demonstrations of plasma lipoprotein separation by electrophoresis agarose gel were performed. The diagnosis of types I-V was discussed in relation to the minimum criteria for establishing each classification. ■



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Codex Alimentarius Standards for Edible Oils

The Food and Drug Administration is providing an opportunity for review and informal comment by interested persons (consumers, industry, the academic community, professional organizations and others) of Recommended International Codex Standards for edible soybean, arachis (peanut), cottonseed, sunflower seed, rapeseed, maize (corn), sesame seed, safflower and mustard seed oils. Proposed permissible additives and methods of analyses are included.

The complete texts have been published in the *Federal Register* 37, October 5, 1972, with a limitation of 120 days for response. AOCS will supply photocopies to any member who does not have access to the Federal Register.

This procedure by the FDA is a new device for obtaining comments to determine the need for and desirability of establishing standards and is not a substitute for the usual formal procedures. ■