New Committee Appointed for Liaison with IUPAC Commission on Oils and Fats

President W.E. Link has announced that a committee has been appointed to insure the technical input of the American Oil Chemists' Society to the development of international analytical methods and other fat and oil projects of the Oils and Fats Commission of the International Union of Pure and Applied Chemistry. This "Liaison Committee for IUPAC" will have a membership duplicating the membership of the American delegation to the Oils and Fats Commission, namely, David Firestone (chairman), William Link, and Norris Embree.

An active program to obtain international methods has been set up by the Commission. Whenever possible, well-researched methods of AOCS and AOAC will be adopted without further development. Furthermore, when new methods are needed, American chemists will often be called upon for collaboration at the earliest stages. For example, the following Americans are already working on needed new international methods: Hal T. Slover on a task force for tocopherol, Alan J. Sheppard for biologically-active linoleic acid, and Arthur E. Waltking for oxidized fatty acids. Many of the chemists from the other countries are also members of AOCS, a fact that also increases the potential technical contribution of the Society.

Firestone and Embree attended the Madrid meeting of the IUPAC commission last September. That meeting marked the end of Embree's term as a Titular Member (member of the executive committee), and Firestone was elected to a 5-year term as Titular Member. It is unusual to have consecutive members from the same country, and it is an indication that Americans are expected to make substantial contributions to the work of the Oils and Fats Commission.

Formerly, the liaison of AOCS with IUPAC had been via the Fats and Oils Committee of the National Research Council. This NRC Committee was discharged last year since it had completed its tasks assigned by NRC and since American fat and oil chemists can serve directly on the IUPAC Commission and task forces. New appointments of American chemists to the Oils and Fats Commission will continue to require clearance by NRC, since it is the "adhering body" to the International Union of Pure and Applied Chemistry.

Norris Embree continues to be the AOCS representative to the Division of Chemistry and Chemical Technology of the NRC. This relationship of AOCS and NRC will probably be changed by the ongoing reorganization of NRC. A change in nomenclature has already taken place; that is, the Division will now be called the Office of Chemistry and Chemical Technology of the Assembly of Mathematical and Physical Sciences. Other changes of interest to AOCS will be reported as they occur. ■

Lindgren Develops Computerized Lipoprotein Detection System at Berkeley

A computerized system for detecting abnormal levels of cholesterol and other fat containing particles which may predispose one to early heart attacks and strokes has been developed by AOCS member Frank T. Lindgren and Gerald L. Adamson at the University of California's Lawrence Berkeley Laboratory (LBL).

The system includes a series of "normal reference values" derived from a population of healthy men and women. These norms are broken down by age and sex, providing physicians a basis of comparison. The system uses a small computer in Donner Laboratory, LBL's biomedical research facility, and a larger (back-up) computer in the Lawrence Berkeley Laboratory Computer Center.

Biophysicist Lindgren, assisted by Adamson, a research technician, began developing has computerized system 2½ years ago. Employing electrophoresis, the method involves placing serum on a specially coated slide, placing the slide in a cell, and passing a 150-volt DC current through it. The slide is then stained to visualize each lipoprotein band; and after drying, it is placed in a scanning densitometer. All necessary calculations and comparisons are performed by the computer—in seconds. The margin of error, Lindgren points out, is ca. 1 in 1,000 as compared to one in 20 doing the job manually.

The data for a typical scan are stored in the small computer in Donner Laboratory, which has a capacity for 24-30 such scans. When the memory fills up, the operator sends the data via a high speed telephone link-up to the big CDC 6600 computer in the computer center for processing. Lindgren estimates that a trained technician is capable of turning out ca. 300 analyses per week with the computerized method as compared to 20-30 per week by the manual method.

In less than 6 months since the system has been in operation, Lindgren and Adamson have performed more than 500 scans. These were mostly samples obtained from the National Institutes of Health, which along with the Energy Research and Development Administration, is supporting the project. Lindgren envisions the system, or one patterned after it, in operation eventually in many of the nation's 7,000 clinical labs, providing a simple, inexpensive lipoprotein test. The cost of such a procedure if done on a large scale, Lindgren estimates, would be less than $5 per analysis.

Lindgren, who received his doctorate in biophysics at the University of California, Berkeley, in 1955, joined Donner Laboratory in 1956 as a research associate and was appointed a research biophysicist in 1967. He has been an AOCS active member since 1968. ■