Interest Mounts in August Symposium on "QUANTITATIVE METHODOLOGY IN LIPID RESEARCH"

Penn State Site in Readiness for August 3-7, 1964 Sessions

In order to better appraise the progress in lipid chemistry and the application of new knowledge and techniques to the many problems in lipid research, the five-day Symposium on "Quantitative Methodology in Lipid Research" should draw record-breaking numbers of registrants to Pennsylvania State University, August 3–7, 1964.

The Symposium has been carefully organized, under the direction of George Rouser, Chairman, and committee members Noel Kuhrt, Nicholas Pelick and J. W. Shigley, through the efforts of the AOCS Education Committee. This educational endeavor will supplant the usual summer short course.

Additional Papers Added to Program

Two new papers have been added to the series of formal presentations for the Symposium, listed on page 14 of your April Journal. They are: "Erythrocyte Lipids," by J. Farquhar, and "Characterization and Identification of Lipids by Their Critical Solution Temperatures," by H. H. O. Schmid.

Every effort has been made to present the broad general scope of the advances in lipid chemistry and their applications, with time for discussion. Access to the facilities of Applied Science Laboratories will provide an opportunity to examine many different types of apparatus utilized in lipid research, and techniques can be discussed. Most of the Symposium contributions will emphasize new findings.

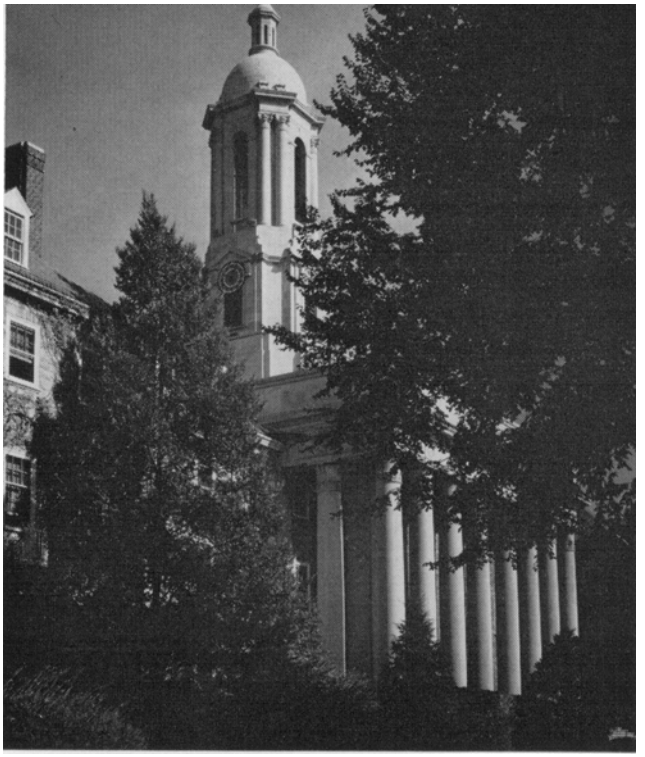
Chemical Synthesis to be Highlighted

A highlight of the Symposium on "Quantitative Methodology in Lipid Research" will be papers on the synthesis of polar lipids. The methods for the chemical synthesis of glycerol based phospholipids will be reviewed in detail by Erich Baer of the University of Toronto; the methods for synthesizing cerebrosides and sphingomyelins will be reviewed and new methods described by David Shapiro of The Weizmann Institute of Science; and finally the synthesis, isolation, and characterization of sphingosine and allied bases will be considered by C. C. Sweeley of the University of Pittsburgh.

Synthetic lipids are important in quantitative lipid research because the substances are pure, have a precisely known and any desired fatty acid composition, and known configuration. Solubility relationships, optical rotation, and other physical and chemical properties can be studied in a precise quantitative fashion with these lipid preparations, in contrast to the difficulties encountered in studying natural products that are mixtures of different fatty acids and, in the case of sphingolipids, may contain several bases other than sphingosine.

Synthetic polar lipid preparations will be of value in the future when they become more generally available for the study of various chemical reactions, including hydrolysis and other degradative reactions as well as studying quantitative relationships of procedures for formation of derivatives (acetylation, etc.). Synthetic lipids offer great promise as standards for quantitative thin layer chromatography, since with this latter technique it is necessary to compare lipid classes of samples with standard substances. The pure synthetic substances in fact serve as the basic reference substances for lipid chemical studies of all types. We can look forward to the preparation of many of the polar lipid classes with fatty acid compositions of diverse natures for all types of studies.

It is well known that polar lipid classes vary greatly in properties, depending upon the precise fatty acid composition, and the availability of extremely pure fatty acid preparations of varying chain lengths and degrees of unsaturation now making possible the chemical synthesis of almost any desired lipid class. The synthesis of glycerol phospholipids can now be accomplished in such a way that the desired saturated or unsaturated fatty acid may be placed on either the 1 or 2 position of the glycerol moiety to give a series of substances of varying physical properties that may be studied in detail and relationships ascertained with precision. Such studies are far too complicated to carry out with the mixtures of molecular species obtained from natural products.



"Old Main" at Penn State

Advance Registration

D. W. Shigley, chairman of the group sponsoring AOCS at Penn State, has provided hotel and meeting room accommodations for a record attendance.

Full details of Symposium fees and registration special notices will be published in the June Journal. However, advance registration may be made with the American Oil Chemists' Society, 35 E. Wacker Dr., Chicago, Ill. 60601. Registration fee of $125 is payable in advance.