

# the CLINICAL Chemist

NEWSLETTER OF THE AMERICAN ASSOCIATION OF CLINICAL CHEMISTS

Vol. 2 No. 1

January 1950

Andre C. Kibrick  
Editor

Harold D. Appleton  
Associate Editor

## EDITORIAL

The appearance of the clinical chemist is a relatively recent occurrence in the long history of medicine. Much of the classical knowledge regarding the composition of body fluids and tissues in normal and abnormal states was obtained by physicians. People forget, however, that many of these early physicians were also chemists. By themselves or with the aid of assistants, who are now called technicians, they endeavored to correlate the results of qualitative and semi-quantitative chemical tests with the clinical condition of their patients. The actual birth of clinical chemistry took place when such chemists as Folin, S.R. Benedict and D.D. Van Slyke, devised quantitative methods for the determination of chemical constituents in small amounts of blood and other body fluids and tissues. Physicians and their technicians were quick to utilize these methods, and medical knowledge was tremendously advanced. The methods used in clinical chemistry gradually became more and more complicated, until at present physicians and their technicians are no longer able to perform them adequately.

There has been a tendency in recent years for the larger hospitals and other organizations to engage clinical chemists who are qualified by training and experience to conduct a modern laboratory in clinical chemistry. These are our members and one of the principal functions of the A.A.C.C. will be to set up standards by which all practicing clinical chemists will produce uniformly reliable results. However, the smaller hospitals cannot afford to employ clinical chemists, and will continue to rely upon technicians to perform chemical analysis. So far, such technicians have been under the supervision of clinical pathologists, who have done their best to cope with modern methods. The A.A.C.C. must help them in every way possible. Until such time when several of the smaller institutions may perhaps jointly engage a clinical chemist to supervise their laboratories, it is our duty to choose adequate methods and set up controls which will ensure reliable results in every laboratory throughout the country.

## STATED ANNUAL MEETING for 1950

The A.A.C.C. will hold its annual meeting in Philadelphia during the A.C.S. meeting, April 9th to 13th. The exact date cannot be set since other functions of the Association, including the Annual Dinner, must first be arranged in conjunction with the A.C.S. We regret that the details of these functions cannot be announced until the next issue but we promise an active program of interest to clinical chemists, and we urge all of our members to be present. If possible, the functions of the A.A.C.C. will be arranged for the same day and will comprise one full day and evening.

NEW OFFICERS OF THE A.A.C.C.

The Executive Committee met at Mt. Sinai Hospital in New York City on Thursday, December 8th, to count the ballots of the election. It was gratifying that 94 ballots were received of which one was blank and 4 others were declared invalid because of major irregularity. It was also gratifying that 73 ballots voted for the regular slate chosen by the Nominating Committee and 16 made at least one change in this slate. The results were as follows:

<u>PRESIDENT</u>	<u>VICE PRESIDENT</u>	<u>SECRETARY</u>	<u>TREASURER</u>
Sobotka (86)	Reinhold (87)	Friedman (85)	Dotti (89)
Friedman (1)	Blatherwick (1)	Benotti (1)	
Sobel (1)	(1 vote for Vice-	Natelson (1)	
Albanese (1)	President was blank)	Reiner (1)	
		Sobotka (1)	

EXECUTIVE COMMITTEE

Benotti (86)	Reiner (2)	Sobotka (1)
Gaebler (85)	Reinhold (2)	Somogyi (1)
Blatherwick (84)	Albanese (1)	E. Thomas (1)
Cheney (83)	Bonsnes (1)	(13 votes were
Sobel (82)	Friedman (1)	left blank)

\* BIOGRAPHICAL SKETCHES OF ELECTED OFFICERS \*

PRESIDENT

HARRY SOBOTKA - Born August 4, 1899 in Vienna, Austria. Studied Chemistry at the University of Vienna and Munich, where he obtained his Ph.D. degree under Willstaetter. Thesis: "Hydrolytic Enzymes". After post-doctorate research with Willstaetter, and microbiological studies in Copenhagen, he worked with P.A. Levene at the Rockefeller Institute from 1924-1926. The subsequent two years were spent in the Department of Bacteriology of New York University Medical College. Since 1928, he has been in charge of the Department of Chemistry of the Mt. Sinai Hospital, where he has actively participated in the development of modern clinical chemistry. In addition to numerous research papers, reviews, articles and text book chapters in the field of clinical chemistry, enzymes, organic chemistry and colloid phenomena, he is the author of two books on steroids and on bile.

VICE PRESIDENT

JOHN GUNTHER REINHOLD - Born in Milwaukee, he received the Bachelor of Science degree at the University of Wisconsin in 1924 and Master of Science from Yale University in 1926. During 1926 and 1927, he was Assistant Biochemist under Dr. Walter G. Karr at the Philadelphia General Hospital. In 1927 he was appointed Principal Biochemist. The University of Pennsylvania awarded him a Doctorate in Physiological Chemistry in 1933. While continuing to direct the chemical activities at Philadelphia General Hospital, he held appointments as Instructor and Associate in Physiological Chemistry in the Graduate School of Medicine of the University of Pennsylvania, and was appointed Assistant Professor in 1946. He transferred from the Philadelphia General Hospital to the University of Pennsylvania Hospital in 1948, where he is now Associate in charge of chemistry of the William Pepper Laboratory of Clinical Medicine. During the recent war he served as chemical consultant to the Commission on Liver Diseases of the Army Epidemiological Board. Publications include about 50 titles.



## SECRETARY

MAX M. FRIEDMAN - After completing his undergraduate work at the University of Alabama in 1930, he carried out graduate work at Columbia University and the Polytechnic Institute of Brooklyn. He was awarded the Ph.D. degree by the latter Institution. Although he would like to think that he has been a clinical chemist for about 20 years, the fact remains that from 1932-1939 he was engaged as a research biochemist in the Department of Pharmacology at New York University. It was not until 10 years ago that he joined the staff of Fordham Hospital in New York City. At present he is Senior Chemist at Queens General Hospital and Consultant Chemist at Lebanon Hospital, Instructor in Biochemistry at Queens College. His main scientific interest, besides trying to teach clinical chemistry to medical interns, is body water, or more specifically extra-cellular fluids. For the past several years he has divided his time between body fluids and nucleic acid in normal and pathological tissues.

## TREASURER

LOUIS BASIL DOTTI - Born August 13, 1903 in New York City.  
1929 - B.S. Columbia University - New York City  
1931 - M.A. Columbia University - New York City  
1936 - Ph.D. Columbia University - New York City  
1929 - 1931 Research Assistant, College of Physicians and Surgeons, Columbia University, New York City  
1931 - 1934 Assistant in Physiology, College of Physicians and Surgeons, Columbia University, New York City  
1934 - 1936 Instructor in Physiology, College of Physicians and Surgeons, Columbia University, New York City  
1934 - 1938 Summer Investigator, Carnegie Institute of Washington, Cold Spring Harbor, Long Island, New York  
1936 - 1942 Assistant Professor of Physiology and Biochemistry, New York Medical College, New York City  
1942 - Chemist, St. Lukes Hospital, New York City  
1942 - Lecturer in Physiology and Biochemistry, New York Medical College, New York City

## EXECUTIVE COMMITTEE

JOSEPH BENOTTI - Born August 31, 1911.  
1934 - B.S. in Chemistry - Holy Cross  
1935 - M.S. in Chemistry - Holy Cross  
1934 - 1935 Teaching Fellow in Chemistry - Holy Cross  
1936 - 1938 Chemist in the Thannhauser Laboratories Boot Dispensary  
1938 - Director of Clinical Laboratories, Pratt Diagnostic Hospital, Boston  
He is Chairman of the Boston Section of the A.A.C.C.  
Conducts refresher courses for technicians of the Bingham Associates. These courses are for laboratory technicians of Bingham Affiliated Hospitals in Maine and Western Massachusetts, and comprises a four week refresher course in chemistry, bacteriology and hematology. He acts as consultant to these outlying hospitals in Maine, helping them with some of their technical problems.  
In addition, he is also an Instructor of Biochemistry and Nutrition at Tufts College Medical School.

NORMAN R. BLATHERWICK - Born February 19, 1887 in Rock Valley, Iowa.

1909 - B.S. Grinnell College

1912 - M.S. Illinois

1914 - Ph.D. Yale University

1929 - Sc.D. (Hon) Grinnell College

1910 - 1911 Graduate Assistant in Chemistry, Illinois

1912 - 1914 Currier Fellow, Yale University

1914 - 1915 Assistant Chemist, Montefiore Home and Hospital

1915 - 1920 Physiological Chemist, Dairy Division, Bureau of Animal Industry,  
U.S. Department of Agriculture

1917 - 1919 Captain Sanitary Corps. Member of First Nutritional Survey Party and  
later Camp Nutrition Officer at Camp Devons, Nutrition Officer,  
12th Division

1920 - 1928 Biochemist, Potter Metabolic Clinic, Santa Barbara, California

1928 - Director of Biochemical Laboratory, Metropolitan Life Insurance Co.

Research Interests - Foods in relation to composition of the urine;

Physiology of milk secretion; Preparation and physiological action of Insulin;

Experimental diabetes; Carbohydrate and fat metabolism.

ALBERT LAURENCE CHANEY - Born May 21, 1900, in Ashville, North Carolina.

1920 - B.A. degree from Washington Missionary College, Takoma Park, Maryland

1925 - M.Sc. University of Minnesota, Minn.

1930 - Ph.D. University of Minnesota, Minn.

High-school teacher - Battleford, Saskatchewan, 1920-1923. Professor of  
Physics and Chemistry, Emmanuel Missionary College, 1925-1928. Assistant Patholo-  
gist in charge of Biochemistry, Los Angeles County General Hospital, 1930-1945.  
Assistant Professor in Pathology, College of Medical Evangelists, 1932 to date.  
Director of Industrial Hygiene and Toxicology, Lockheed Aircraft Corporation, 1941-  
1945. Owner and Director of the Albert L. Chaney Chemical Laboratory, 1936 to  
date, ( Biochemical Research ).

OLIVER H. GAEBLER - Born in 1895 at Swiss, Missouri. After receiving the A.B. de-  
gree from Central Wesleyan College in 1917, he spent three years at the University  
of Missouri, where he completed the first two years of Medicine and did graduate  
work in Anatomy and Chemistry, receiving the M.S. degree in 1920. His interest  
in biochemical methods of analysis and in hormones began during the summer of 1920  
at the University of Chicago. During the following two years he was a fellow at  
the University of Toronto, and received the Ph.D. degree in 1922. His research  
work was concerned with the metabolism of creatine and creatinine. He completed  
the third year of medicine at John Hopkins University, and was Research Associate  
at the University of Rochester for a year. Assistant Professor of Biochemistry  
at the State University of Iowa for three years. He finally completed his medical  
course at Cornell University in 1928. From then until May 1947, he was Associate  
in Chemistry at Henry Ford Hospital. In 1947, he became Director of Biochemistry  
at the Edsel B. Ford Institute for Medical Research. His papers are concerned  
with isolation and identification problems, analytical methods, metabolic studies  
with particular reference to the results of vitamin deficiencies and action of  
hormones.



ALBERT E. SOBEL -

1925 - 1930 Laboratory Assistant, Department of Biochemistry, Rockefeller Institute

1931 - 1933 Staff Chemist- Pediatric Research Laboratory, Jewish Hospital of Brooklyn

1933 - 1936 Chemist-in-Charge - Pediatric Research Laboratory, Jewish Hospital of Brooklyn

1936 - Head - Department of Biochemistry

Adjunct Professor of Chemistry, Polytechnic Institute of Brooklyn. (Biochemistry, Ultramicro Quantitative Analysis) 1946 to date. Lecturer in Blood Chemistry, Hunter College 1943-1947. Lecturer in Advanced Biochemistry, Brooklyn College Graduate Division 1942-1946. Lecturer in Biochemistry, Long Island College of Medicine, 1948. Author of about 80 papers on (1) Micromethods (2) Mineral metabolism (bone) (3) Sterols (4) Gastric Ulcers (5) Aqueous dispersion of fat-soluble vitamins.

\* LOCAL SECTIONS \*

METROPOLITAN NEW YORK

The Metropolitan New York Section of the American Association of Clinical Chemists will hold its second lecture meeting of the season on Tuesday, January 24th, at the Womens Clinic, New York Hospital, 530 East 70th Street, at 8:30 P.M.

The guest speaker will be Ely Perlman, M.D. of the Mt. Sinai Hospital, who will speak on " A Quantitative Method for the Determination of Antihistiminic Compounds Containing the Pyridine Radical ".

" THE APPLICATION OF PHYSICO-CHEMICAL METHODS TO PROBLEMS IN CLINICAL CHEMISTRY "

Kurt G. Stern, Department of Chemistry, Polytechnic Institute of Brooklyn

( Lecture Presented before the Metropolitan New York Section )

( November 22, 1949 )

Abstract

The type of information obtainable from certain physical-chemical methods may be summarized briefly in the following manner: Electrophoresis yields quantitative information on the composition of complex mixtures of proteins and other colloids as they occur in biological fluids. It permits labeling of a given component by determining its electrophoretic mobility and to control the success of chemical fractionation procedures. It affords analytical data on the distribution of plasma and serum proteins, and it may be used for the isolation, on a small scale, of homogeneous components from these and other systems. The ultracentrifuge also furnishes information on the composition of colloid mixtures. But in the instance of blood serum or plasma, fewer components are revealed than by electrophoresis because the electric charge is a more specific property of proteins than molecular weight. The main use of the ultracentrifuge in biochemical work is that of a primary tool for the determination of molecular weights of purified proteins and other large molecules and for measuring the shape of the particles, especially in conjunction with diffusion measurements.

Macromolecular mixtures may be separated in the quantity ultracentrifuge on a modest scale. One of the more successful applications in that field is the isolation of plant and animal viruses from biological fluids and tissue extracts. Optical adsorption analysis has recently been added to our store of physical-chemical methods. Here, the separation by electrical fields or gravitational force is replaced by specific affinities to suitable adsorbents. One advantage of this technique is that it may readily be applied to mixtures of low-molecular compounds, e.g. amino

acids or fatty acids, contained in aqueous or organic solvents.

It can be shown that the classical salting-out methods fail to yield homogeneous fractions when applied to complex systems such as serum or plasma. Electrophoretic analysis affords an almost automatic means of quantitative protein distribution studies and of the determination of the albumin/globulin ratio. Of the chemical methods available today, the low temperature, low-ionic strength alcohol fractionation is capable of yielding well defined fractions and A/G ratios comparable to those obtainable by electrophoretic analysis. Electrophoretically homogeneous fractions on the other hand, may be further separated into their components by chemical methods.

The application of physical-chemical methods to clinical problems was illustrated by specific examples taken from recent work on liver diseases (cirrhosis, hepatitis) on Hodgkin's Disease, sickle cell anemia and especially on multiple myeloma. The detailed study of a case of the latter disease with a variety of physical methods including electrophoresis, ultracentrifugal sedimentation, isotope techniques and paper chromatography, was outlined with particular reference to the characterization of an anomalous protein component, present in the serum, and migrating with the mobility of gamma globulin without being identical with it.

#### PHILADELPHIA

Some 40 members and guests of the Philadelphia Section met November 29th, at the Hospital of the University of Pennsylvania to discuss the "Chemical Quantitation of Ketosteroids in Urine". Drs. Viergiver and Richardson were the speakers.

At the business meeting that followed, Alex Keller reported that the Nominating Committee proposed for Chairman of the Section, John Reinhold; for Vice-Chairman, Charles Grosscup; for Secretary, Ellenmae Viergiver. No other nominations were offered from the floor and the foregoing were elected to serve for a period of one year. The Section will undertake to make arrangements for the Annual Meeting of the entire Association to be held in April at the time of the American Chemical Society meeting in Philadelphia. Albert Sample has agreed to act as Chairman of a Committee on Arrangements. Applications for membership to the Association coming within the jurisdiction of the Philadelphia Section were referred to a Committee on Membership consisting of Charles Grosscup, (Chairman), Alex Keller, Meyer Samson and Herman Siplet.

Plans for future meetings were discussed. The tentative program announced in the previous issue, will require modification to avoid conflicts with national meetings. The next meeting will be held as announced on January 31st. The subject to be discussed will be "Practical Methods for Determination of Serum Protein and its Major Components".

EDWIN M. RICHARDSON - Born August 3, 1912 in Baltimore, Maryland. Received his B.S. in 1933 and Ph.D. in 1938 from John Hopkins University, majoring in organic chemistry. He has worked in the fields of antibiotics, amino acids, steroids and vitamins, and is at present Research Associate in Medicine in the Endocrine Laboratory at the Hospital of the University of Pennsylvania.

Abstract of paper: The origins of the urinary steroids were given and a scheme shown for the separation of these steroids into groups. The diagnostic value of the determination of the estrogens, pregnandiol, 17-ketosteroids and corticoids was discussed with particular emphasis on the latter two. Recent interest in other non-ketonic steroids and 20-ketosteroids was mentioned. Some of the methods used were listed. A description of a method of extraction and purification of the urinary corticoids was given, followed by details of the phosphomolybdate method for their colorimetric determination. A comparison was made with the cupric ion reducing method, the formaldehyde liberating method and the liver glycogen bioassay method. The conclusion was drawn that, in spite of the greater specificity of the bioassay method, the method of choice for routine chemical work is the phosphomolybdate method of Heard, Sobel and Venning, because of its ease of manipulation, sensitivity and reproducibility.



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## EDITORIAL

Some years ago the writer was considering a position in California which involved the supervision of a number of technicians in clinical chemistry. It would have been necessary to have a state license in medical technology or certification as "Medical Technologist" by the Association of Clinical Pathologists, to qualify for this position. The requirement for examination for technologist in California is a degree of B.S. with courses in Chemistry, Bacteriology, Parasitology, Hematology, etc., and 5 years' experience as a technician. In other words, the requirements are those of an experienced technician in a clinical laboratory under the supervision of a pathologist. This is an old story to clinical chemists. They are classed merely as high grade technicians, and often not even high grade. There is no demarkation between the field of clinical chemistry and the general field of medical technology. In fact, most pathologists under whose supervision laboratories in clinical chemistry function, would rather have certified technicians capable of performing diverse tests in medical technology than fundamentally sound biochemists whose profession is limited to clinical chemistry. This is not a healthy situation.

Clinical chemistry has certainly advanced to a point where it is a profession in itself. Gifted biochemists have long been identified with this field of endeavor, and their accomplishments are evident in any current number of journals on medicine, biochemistry, physiology, hematology, endocrinology and the like. In many cases, their assistants and associates have also limited themselves to clinical chemistry. However, all are grouped together, more or less, in the conglomerous field of medical technology, and many must qualify and be licensed by standards which are too general for present day practice of Clinical Chemistry. We are chemists! It is just as silly to deny the existance of chemistry in the clinical field as it would be to deny that chemistry is a science in itself.

The present editor regrets that the burden of other work impells his resignation as Editor of the "Clinical Chemist". He wishes to say that it was a pleasure to act in this capacity for the Association and that he expects to remain a very active member of the American Association of Clinical Chemists.

ACTIVITIES AT THE A.C.S. MEETING TO BE HELD IN

PHILADELPHIA APRIL 9th- 13th

The ASSOCIATION urges all of its members to make every effort to attend, and promises them a good time. Aside from the scientific interest for every Clinical Chemist, this meeting will be of the utmost importance for the future of our profession!

ANNUAL MEETING OF THE A.A.C.C. - PHILADELPHIA

Wednesday - April 12th

The American Association of Clinical Chemists will hold its Annual Meeting in Philadelphia, Wednesday, April 12th at 5 P.M. in the Raleigh Room of the Ritz-Carlton Hotel, Broad and Walnut Streets. There will be reports on the present status of the Association by the officers and chairmen of committees. Discussion of policies and course of action towards matters such as legislation affecting clinical chemistry will comprise the major portion of the agenda.

This meeting is open only to members in good standing of the Association. Registration for the American Chemical Society Session is not required.

Since the Clinical Chemists Dinner is scheduled for 6:30 the same evening, members are urged to be on hand promptly at 5 P.M. so that the business meeting can start on time. The Ritz-Carlton Hotel is directly across Broad Street from the Bellevue Stratford Hotel.

CLINICAL CHEMISTS ANNUAL DINNER

Bellevue Stratford Hotel - Philadelphia

A dinner sponsored by the American Association of Clinical Chemists is to be held Wednesday, April 12th at 6:30 P.M. in the Rose Room of the Bellevue Stratford Hotel. The dinner will follow the Annual Meeting of the Association which is announced elsewhere in this issue.

At the dinner, there will be opportunity to hear topics of vital interest to clinical chemists discussed by well-known speakers. Professor W.R. Bloor will talk on training of Clinical Chemists. Professional relationships between chemists, other specialists in laboratory medicine, and clinical pathologists will be discussed by Dr. Max Strumia. Representatives of the Committee on Clinical Chemistry of the American Chemical Society and the American Board of Clinical Chemistry will be present who will outline activities and plans. In lieu of a presidential address, Dr. Harry Sobotka will speak on the timely topic "Proposed Chemical Tests for Cancer" and also on policies and plans of the Association.



Honorary membership in the American Association of Clinical Chemists, will be conferred on Professor Bloor at the dinner. He is well known to clinical chemists the world over for his numerous and noteworthy studies in the field of lipid chemistry. For many years he has been head of the Department of Biochemistry of the School of Medicine and Dentistry - University of Rochester. His influence on Clinical Chemistry, both as teacher and investigator, has been extensive.

Dr. Max Strumia, as Director of the Laboratory of the Bryn Mawr Hospital, has for many years enlisted the cooperation of Clinical Chemists for hospital service and investigational activities. Dr. Strumia has gained renown as an outstanding investigator in the field of blood preservation, blood substitutes, and blood transfusion. As a leading pathologist who has long maintained harmonious relations between clinician, pathologist and chemist, his comments should prove helpful.

Tickets will be on sale as usual at the ticket desk of the American Chemical Society, near the registration desks. All who are interested in Clinical Chemistry are invited. Attendance is not restricted to members of the Association, since the dinner is one of the regular activities of the American Chemical Society's Philadelphia Meeting. Purchase of tickets at the earliest opportunity is urged, in any case, not later than Wednesday noon. There is no certainty that those waiting to purchase tickets at the door can be accommodated.

#### SYMPOSIUM ON THE EFFECT OF STEROIDS ON MAMMALIAN METABOLISM

Rose Room, Bellevue Stratford Hotel - Tuesday - April 11

Presiding - ANTHONY A. ALBANESE

Following the success of the symposium on Clinical Chemistry of last September, the Association instructed one of its members, Anthony A. Albanese, to arrange a symposium on the effects of steroids on metabolism for this meeting. Certain difficulties were encountered and this symposium has been arranged for the morning of Tuesday, April 11, under the sole sponsorship of the Division of Biological Chemistry.

#### - Program -

- |   |  |       |
|---|--|-------|
| 1. Introductory Remarks -   | Anthony A. Albanese                        | 9:00  |
| 2. Chemical Structure and Biological Activity of Steroids -               | Martin Rubin                               | 9:05  |
| 3. The Effect of Steroids Upon Carbohydrate Metabolism -                  | Dwight J. Ingles                           | 9:40  |
| 4. The Endocrine Control of the Metabolism of Serum Proteins and of Fat - | Louis Levin                                | 10:15 |
| 5. The Effects of Steroids on Protein and Amino Acid Metabolism -         | Anthony A. Albanese<br>Reginald A. Higgins | 10:50 |
| 6. Steroids, Hormones and Enzymes - (A review) -                          | Charles D. Kochakian                       | 11:25 |

Whereas, in the public interest, it is the aim and object of the American Association of Clinical Chemist, to raise the level at which clinical chemistry is practiced in the clinical laboratory, and

Whereas, clinical chemistry is a discipline defined as - "That branch of chemistry which deals with the composition of the secretions, concretions and fluids of the human body in health and disease and the chemical composition and metabolism of cells and tissues. Also the search for the presence of substances (or their derivatives) given for diagnostic or therapeutic reasons and the search for poisons (or their derivatives) are properly included in the field of clinical chemistry".

Be It Therefore RESOLVED, that

1. We oppose any concept which defines the Practice of Clinical Chemistry as the Practice of Medicine.

2. We disapprove of any regulation requiring Clinical Chemists to pass examinations in techniques other than the field of Clinical Chemistry.

3. We propose to encourage the establishment of laboratories engaged in clinical chemistry, as defined, and directed by clinical chemists. Where such separate units are not available, we hold that the procedures in Clinical Chemistry shall nevertheless be supervised and performed by those whose training and experience is adequate in this science.

Adopted by the Executive Committee of the American Association of Clinical Chemists, Inc. on January 19, 1950.

(signed) Harry Sobotka President

(signed) Max M. Friedman Secretary

#### ABSTRACT OF MINUTES

The Executive Committee Meeting was held in New York City, January 19, 1950 and those present included Harry Sobotka, President; Max. M. Friedman, Secretary; Louis B. Dotti, Treasurer; Albert E. Sobel and Roy W. Bonshes, Alternates; Anthony A. Albanese (by invitation) and Miriam Reiner (by invitation).

The following Committee Chairmen were announced:

MEMBERSHIP -	Louis B. Dotti
LEGISLATIVE -	Harry Sobotka, ex officio
PROGRAM -	Anthony A. Albanese
STANDARDS and PERSONNEL -	Albert E. Sobel
METHODS -	Miriam Reiner
SURVEY COMMITTEE -	Warren M. Sperry



COMMITTEE on MEMBERSHIP reported to December 31, 1949

MEMBERS	125
ASSOCIATES	<u>44</u>
total	169

TREASURER'S report to January 19, 1950

TOTAL INCOME	\$ 1,099.50
EXPENSES	436.90
BANK BALANCE	<u>\$ 662.60</u>

Anthony A. Albanese reported for the Program Committee that some difficulties had arisen concerning the projected symposium for the 117th Meeting of the A.C.S. in cooperation with the Division of Biological Chemistry.

The Legislative Committee reported on several conferences held during the past few months with other groups, (a report from this Committee and a resolution adopted by unanimous vote is included elsewhere in this issue)..

Survey Committee on Clinical Chemistry - The Department of Hospitals of the City of New York, comprising a group of about 30 Institutions with a total bed capacity exceeding 20,000, has invited the A.A.C.C. to make an extensive survey of facilities for Clinical Chemistry, and to report to the Commissioner of Hospitals with recommendations for improvements. The Committee consists of Warren Sperry, Chairman; Max M. Friedman, Secretary; Roy W. Bonsnes, Israel S. Kleiner and Harry Sobotka. The work on this survey has already begun.

A publicity pamphlet was submitted and approved which is now available for distribution.

A journal of clinical chemistry was again discussed with the unanimous agreement that, although desirable, such an undertaking should be approached with caution.

It was noted that we are eligible for affiliation A.A.A.S. since we have a sufficient number of members who are also members of the American Association for the Advancement of Science. Seven members on the Committee on Clinical Chemistry of the A.C.S. are also members of the Association. Of the nine on the American Board of Clinical Chemistry, however, only two are members of the A.A.C.C.

An article appeared in the New York Times of January 10, 1950, which stated "that the American College of Surgeons approved 3,284 hospitals in the United States and Canada. We must also make sure that the calibre of clinical chemistry in those hospitals is also satisfactory.

Respectfully submitted,

Max M. Friedman, Secretary

While the clinical chemist was occupied as a scientist in developing his speciality, other groups were occupied toasting their legislators. This has resulted in a maze of discriminatory legislation wherein the chemist is inhibited in the development of his science. Obviously, even the highest scientific acumen of the chemist will not bring to the public directly the fruits of his developments, if he is hampered by legislation conceived in self interest.

At the present writing it is not possible to discuss any definite action on legislation aside from the resolution published elsewhere in this issue. The Legislative Committee has carried on discussions for several months with the New Jersey Association of Clinical Laboratory Directors and the New Jersey Society of Clinical Pathologists concerning proposed legislation in their State. Since the final draft has not yet appeared, the Executive Committee was unable to comment upon it, except that our opposition may be assumed if it is contrary to the policy expressed in said resolution.

A bill has already been proposed in the New York State Senate with contents similar to the discriminatory bill proposed in New Jersey last year. There is reason to suspect that these are not isolated instances, and that other states will follow in short order. In all matters relating to legislation, the Association will work closely with the American Chemical Society.

#### - LOCAL SECTIONS -

##### METROPOLITAN NEW YORK

Abstract of the lecture of Dr. Ely Pearlman, of the Mt. Sinai Hospital in New York, delivered at a meeting of the Metropolitan New York Section on the evening of January 24th at the Women's Clinic of New York Hospital.

#### "A Quantitative Method for the Determination of Antihistaminic Compounds"

A fluorometric method suitable for the determination of available antihistaminic compounds was described. The test is based on the observation that cyanogen bromide reacts with these drugs to form a compound which exhibits an intense blue fluorescence when exposed to near ultraviolet light. This test was applied to all available antihistaminics and to two related synthesized compounds. Fluorescence was observed only in those which contained three nitrogen atoms in the same configuration as found in Pyribenzamine. The compounds which contain the pyridine radical alone, developed a color which could be intensified by means of coupling agents such as p-aminoacetophenone.

The fluorescence obtained was in all cases blue and resembled thiochrome, not only in color, but also in its property of being reversibly quenched by reducing agents.

The test was applied to a study of the urinary excretion of Pyribenzamine in patients receiving this medication. No free bases were obtained when such urines were made alkaline and extracted with organic solvents. It was found however, that if such urines were heated with alkali, material then could be extracted with organic solvents which would develop a fluorescence with cyanogen bromide. This material appears to be Pyribenzamine in view of the fact that it could be



precipitated as the picrate with the same melting point as Pyribenzamine Picrate, and mixed crystals exhibited the same melting point. It was further shown that the isolated material had antihistaminic activity on testing it pharmacologically. The material was also studied at three values of pH in the Beckman ultraviolet spectrophotometer and was found to have identical maxima, minima and isobestic points as found for Pyribenzamine itself.

Applying this method to a study of the rate of excretion of single doses of Pyribenzamine in patient's urine, it was found that about 10 percent of the ingested dose was excreted in 24 hours and that intravenously administered Pyribenzamine was excreted at the same rate and to the same extent as the same dose taken orally.

The Metropolitan New York Section of the American Association of Clinical Chemists will hold its third meeting of the season on Wednesday, March 29, 1950 at the Women's Clinic of the New York Hospital 530 East 70th Street at 8:30 P.M. The speaker will be Albert E. Sobel, Ph.D. - Head of the Department of Biochemistry at Jewish Hospital of Brooklyn, N.Y., who will speak on

#### " STUDIES OF THE MECHANISM OF CALCIFICATION "

##### Abstract

The composition of growing teeth and bones can be varied by the diet. This variation in composition may be of practical importance if a relationship is found between caries susceptibility and composition.

Physico-chemical concepts explain some aspects of calcification, (1) The composition is related to that of body fluids, (2) New calcification depends on the calcium-phosphorous product ( $Ca \times P$ ) above a critical level.

Calcification in vitro studies were undertaken to gain some insight of the reason for the specific sites of calcification. It was possible to demonstrate reversible inactivation of the calcifying mechanism. The results indicate the existence of a constituent in the cell which combines with calcium as an essential preliminary step to mineralization.

#### PHILADELPHIA SECTION

Abstracts of Papers given at the Meeting  
of the Philadelphia Section on January 31, 1950

#### " FACTORS EFFECTING THE KJELDAHL METHOD APPLIED TO SMALL SAMPLES "

Gail L. Miller

The nitrogen method of Koch and McMeekin has been made convenient and reliable for amino acids, purines and pyrimidines, certain vitamins and allied substances, urine, blood plasma, purified proteins and tissue extracts. Convenience depends on the use of an electric digester and machine for mixing Nessler's reagent with the sample for 5 minutes with sulfuric acid, followed by repeated additions of hydrogen peroxide.

Dr. Miller graduated and obtained his M.A. degree from the University of Illinois in 1934. He then obtained his Ph.D. degree with du Vigneaud in 1937 at Cornell. After a year's study with Svedberg in Sweden, he worked for 5 years with Stanley at the Rockefeller Institute. His work has covered the synthesis of peptides, the study of the sulfur of insulin, the preparation of chemical derivatives of viruses, and recently, electrophoretic and ultracentrifugal studies on the proteins of cancer tissue.

#### " A SUB-MICRO KJELDAHL NITROGEN METHOD "

David Seligman

A method for the determination of 20 micrograms of total nitrogen was described. The sample is digested in a bottle which is used first as the digestion flask and later as the diffusion cell. The bottle, 7x2.8 cms., is the type used for dispensing streptomycin. The liberated ammonia is measured colorimetrically by Nesslerization. The method can be modified to measure ammonia or urea. Data was presented to show the good replicability and absolute accuracy obtainable for the total nitrogen of serum and urine.

David Seligman was born in Philadelphia 1916. Advanced academic training includes Sc.D. in Biochemistry, John Hopkins University, 1942; M.D. University of Utah, 1946. Positions held: Subprofessional Chemist, U.S. Dept. of Agriculture, 1935-1940; Associate Research Biochemist in charge of fat and protein deterioration studies on dehydrated meat, 1942-1943; Research Fellow in Pediatrics, University of Utah 1946-1947; Intern, Barnes Hospital, St. Louis, 1948; Resident, Internal Medicine, Northern Permanente Foundation, 1949. At present, U.S.P.H. Fellow in diabetes research, Cox Institute, Hospital of the University of Pennsylvania.

#### " THE USE OF SALT MIXTURES FOR ANALYTICAL SEPARATION OF ALBUMIN AND GLOBULIN "

John G. Reinhold

Difficulties arising in application of the high concentrations of sodium sulfate required for complete separation of albumin from globulin, are largely overcome by use of combinations of sodium sulfate and sodium sulfite. Several such mixtures have been tested using normal and pathological specimens by comparing the results with those obtained by electrophoresis. A solution containing 208 grams of sodium sulfate and 70 grams of sodium sulfite adjusted to pH 7 with H<sub>2</sub>SO<sub>4</sub> and made to 1000 ml. with water gives results that closely approximate the electrophoretically measured albumin in normal serums.

In specimens from patients, the difference is less than 0.5 gram per 100 ml. in 90 per cent. Low values for albumin were found when the globulin concentrations are excessively high (7 grams or higher). A method was described that utilizes the above mixed salt solution in proportion of 7.5 ml. with 0.5 ml. of serum. Precipitated globulin may be separated either by filtration or by the ether stratification method of Kingsley. Time of shaking must be controlled in the latter. Good agreement was found between the results of micro-Kjeldahl and biuret determinations both for total protein and albumin.



## " THE BIURET REACTION "

Howard W. Robinson

The biuret reaction as a basis for routine determinations of blood serum proteins is favored in the busy laboratory because its advantages include (1) no significant amounts of interfering substances; (2) easily reproduceable and stable reagents; (3) color variations obeying the Lambert-Beer law; (4) same chromogenic power per unit of protein nitrogen for serum albumin and globulin of various species; (5) applicability with most fractionation procedures; (6) little change in color intensities with temperature. The variations of currently used biuret methods were discussed and the need for a standardized clinical method was suggested.

Howard W. Robinson, Professor of Physiological Chemistry, Temple University School of Medicine; Section Editor, Methods and Apparatus, Biological Section of Chemical Abstracts; Member, American Chemical Society, American Society of Biological Chemists, Sigma Xi, Fellow American Association for Advancement of Science.

### BOSTON SECTION

Abstract of the lecture of Dr. F. N. L. Taylor, Director of the Bio-Chemical Laboratory of the Boston City Hospital, delivered at a meeting of the Boston Section, January 11, 1950.

Dr. Taylor commenced by enumerating some of the many existing methods for protein separation. They may be classified generally as follows into three groups: (1) Chemical (2) Physical (3) Immunological. He described the several chemical methods and spoke of their advantages and disadvantages. The Howe method was discussed at length.

Physical methods, such as the falling drop and copper sulfate techniques based on the densimetric measurements, were analyzed, and the refractometric method of Tiselius was described.

The immuno-chemical method involving antigen-antibody combination was then brought up. Fibrinogen determinations which is sometimes requested in the clinical laboratory was discussed. Since this protein is influenced by such factors as salicylates, Vitamin K, and Tocopherol, it is better not to designate such results as fibrinogen, but as clottable nitrogen.

Dr. Taylor referred to an article by Dr. Edwin Cohn on protein fractionation which appeared in the February issue of the Journal of Biological Chemistry.

Dr. William Wallace, Associate Physician at Children's Hospital, delivered a lecture on the Flame Photometer on February 15th. The audience consisting of about 50 people, were very much impressed with Dr. Wallace's knowledge and experience of flame photometry. Apparently he gathered this the hard way with a home-made instrument, before this apparatus was available commercially.

## ILLINOIS - Samuel Natelson

Clinical Chemistry here, is in the hands of technicians. The large number of technician schools here, turn out numbers of semi-trained people who do every thing from blood counts, blood typing, tissue slicing to blood sugars. Procedures are run in a cook-book fashion with commercially supplied reagents and calibrated instruments such as, the Jr. Colman, Hellige, the Leitz, Cenco-Photometer and manual Colorimeters. Emphasis is placed on obtaining a result rather than upon obtaining a result which is accurate.

There are very few hospitals in this area which have trained chemists and personnel who are at least college graduates. With the exception of specialists who are engaged in research, the condition even in the best known hospitals, is unsatisfactory.

Recently we organized a Chicago Section of the American Association of Clinical Chemists. The officers are: President: Douglas A. MacFadyen, Presbyterian Hospital; Vice President, C. Cohn, Michael Reese Hospital; Secretary, S. Roseman, Bobs Roberts Hospital; Treasurer Chi Che Wang, Hines Hospital.

There is a movement now afoot to raise the standards at which Clinical Chemistry is practiced in the Chicago area and the Middle West.

## LOS ANGELES - Albert L. Chaney

During the recent visit of President Harry Sobotka to the west coast, an informal meeting of the members in Los Angeles County was held for the dual purpose of meeting Dr. Sobotka and getting acquainted with each other. Plans were laid for formal organization of a Section with regular meetings. Seventeen members and prospective members with applications pending, were present, in addition to the guest of honor.

The large hospitals, such as the Veteran's facilities, the Los Angeles County Hospital and the Cedars of Lebanon, were represented by eight, with the independent laboratories furnishing the rest, including two M.D.'s, Dr. A. George Sheftel and Dr. Richard Henery. Others in attendance who will be recognized by their eastern colleagues were: George R. Kingsley, Leo Pierce, Harry Sobel, Arnold Ware and Gordon Allen.

Dr. Sobotka outlined the objectives of the Association and its current legislative problems which was followed by general discussion of local legislative problems, professional status and laboratory practices.

## CLINICAL CHEMISTRY IN CALIFORNIA - George R. Kingsley

It is impossible for a Clinical Chemist to direct a laboratory or make tests in the state of California unless he complies with the articles of the Clinical Laboratory Act (Article 5, Section 1282-1283). Minimum experience required for examination for technologist license are outlined on page 9 (Article 1, Section 1030). Because of these regulations, many outstanding clinical chemists such as Dr. A.L. Chaney, (who developed the most widely used iodine method - the Chaney Still) are forced to operate their laboratories under the supervision of a physician or surgeon.



The examinations for technologists' license are becoming more difficult each year because of increasing pressure of the County Medical Associations to limit the licensing of laboratory directors to pathologists. In one of the last examinations only three (3) individuals passed the examination.

I personally would like to direct my own laboratory specializing in biochemical tests, such as hormone, sterol, lipid, mineral, toxicological etc., analyses of human body fluids. However, under the present restrictions in the State of California this is not possible, as I would be forced to become a serologist, hematologist, bacteriologist in order to qualify as a technologist. The laboratories of licensed technologists are frowned upon by the Medical Societies and are referred to as "lay-laboratories". I object to the other alternative of placing my laboratory under the direction of a pathologist.

#### PAMPHLET DESCRIBING A.A.C.C.

In answer to many requests from prospective members for additional information on the organization of the A.A.C.C., the Membership Committee has published a pamphlet in which the aims as set forth in the A.A.C.C. Constitution and the achievements of the past year are shown. A complete list of the National Officers, Local Section Chairmen and Chairmen of the Standing Committee is included.

This pamphlet will be sent together with an application blank, to all applicants. Inquiries should be addressed to Miriam Reiner, Secretary Membership Committee, Chemistry Dept. Mt. Sinai Hospital, Fifth Avenue at 100 Street, New York City, New York.

#### LETTERS TO THE EDITOR

Dear Sir:

Most of us who have been engaged in this field, have experienced the difficulty of publishing papers concerned exclusively with Clinical Chemistry. There is no medium for our profession. As in everything else, we are orphans when it comes to getting our papers published. The major journals in any way pertaining to the field of Clinical Chemistry, accept papers in this subject with most reluctance.

The Journal of Biological Chemistry will accept such papers if they are novel. The Archives of Biochemistry will also accept such papers but even less readily. The Journal of Clinical Investigation sometimes accepts such papers from individuals. Most cooperative is the Journal of Laboratory and Clinical Medicine, but it has recently relegated laboratory papers to a rear section.

Finally, the Journal of Clinical Pathology accepts papers on Clinical Chemistry with little editorial perspicacity and incorporates them in a Technical Supplement. It is of the utmost importance, therefore, that the American Association of Clinical Chemists establish a journal of its own which will compare favorably with those in allied fields. I recommend and urge the Executive Committee to take some action in this direction.

New York

SOL SKUPP

NEW MEMBERS AS OF MARCH 17, 1950

- Irving Geltman - 314 Commonwealth Avenue, Boston, Mass.  
 William R. Brown - Hahnemann Hospital, Philadelphia, Penn.  
 Albert A. Dietz - Toledo Hospital, Toledo 6, Ohio.  
 Harold B. Pierce - University of Vermont, College of Medicine,  
 Burlington, Vermont.  
 Gerda G. Mayer - 276 Riverside Drive, New York, New York.  
 Solomon Skupp - 1459 Ocean Parkway, Brooklyn, N.Y.  
 Edwin M. Richardson - University of Pennsylvania Hospital,  
 Philadelphia 4, Penn.  
 Cecilia Riegel - 1002 Aikens Road, Philadelphia, Penn.  
 Warren M. Sperry - 722 West 168th Street, New York 32, N.Y.  
 Daniel H. Basinski - Research Laboratory, Children's Fund of Michigan  
 660 Frederick Street, Detroit 2, Michigan  
 Clarence J. Weber - Veterans Administration Service, Wadsworth, Kan.  
 Joseph Hodges - Dupray Laboratory, Hutchinson, Kansas.  
 F.M. Remer - 289 Greenwich Avenue, Greenwich, Conn.  
 Emil K. Ventre - 215 Wood Street, Houma, La.  
 Richard M. Carson - Carson-Saeks Inc. Dayton, Ohio.  
 Reuben R. Saeks, Carson-Saeks Inc. Dayton, Ohio.  
 Margaret M. Golding - 1260 Morado Place, Altadena, Cal.  
 Ruth L. Brunner - 5311 The Paseo, Kansas City 4, Mo.  
 Beatrice E. Bazoll - 94 Hutchings Street, Roxbury 21, Mass.  
 Clarence Cohn - Michael Reese Hospital, Chicago 16, Ill.  
 Evangeline K. Papageorge - School of Medicine, Emory University,  
 Emory, Georgia.  
 Antoinette Soszynska - 19 Ossipee Road, West Somerville 44, Mass.  
 Dorothea T. Harris - 133 West 74th Street, New York City, N.Y.  
 Kurt M. Dubowski - The Norwalk Hospital, Norwalk, Conn.  
 Sam Berkman - 300 South Beverly Drive, Beverly Hills, Cal.  
 Richard J. Henry - 300 South Beverly Drive, Beverly Hills, Cal.  
 Elizabeth K. Stone - Boz 2, Hanover, Mass.  
 Eugene Kanabrocki - 2035 Webster Avenue, Chicago, Ill.  
 Orie H. Powers - 95 Park Drive, Boston 15, Mass.  
 Elinor M. Zorn - P.O. Box 313, V.A. Hospital, Hines, Ill.  
 Seward E. Owen - 418 South 20th Avenue, Maywood, Ill.  
 Clarence E. Lovell - 1545 West 9th Street, Des Moines, Iowa.  
 Alice M. Laughlin - Staten Island Hospital, Staten Island, N.Y.  
 Harold Murdock - 916 Delaware Avenue, Buffalo, New York.  
 William Q. Wilson - Michael Reese Hospital, Chicago, Ill.  
 Douglas A. MacFadyen - Presbyterian Hospital, Chicago 12, Ill.



# The CLINICAL Chemist

NEWSLETTER OF THE AMERICAN ASSOCIATION OF CLINICAL CHEMISTS, INC.

VOLUME 2 NUMBER 3

MAY 1950

## Dr. Bloor Honored at Annual Dinner

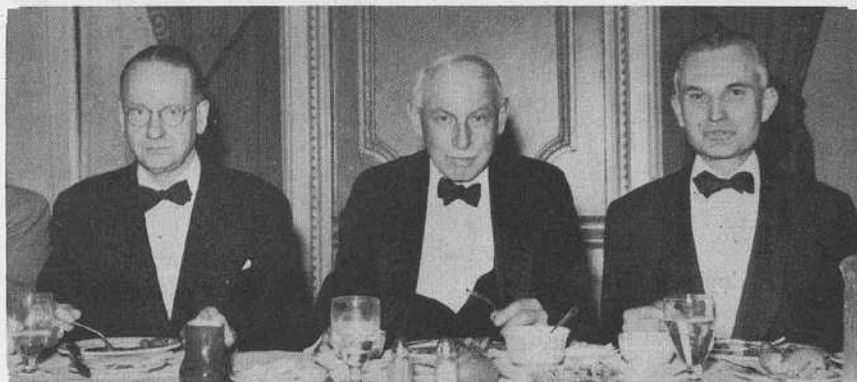
The first honorary membership in the American Association of Clinical Chemists was conferred upon Walter R. Bloor, Professor Emeritus of Biochemistry at the University of Rochester, during the Association's annual dinner held at the Bellevue-Stratford Hotel in Philadelphia on April 12.

Dr. Bloor, who has long been active in promoting higher professional standards for clinical chemists, was born in Ingersoll, Ontario, Canada in 1877. After graduating from the Ontario Normal College in 1903 he became an instructor and later an assistant professor at Washington State College. He then went to Harvard where he received an A.M. degree in 1908 and a Ph.D. in 1911 serving at the same time as an assistant in biochemistry at that institution.

After appointments in Washington University in St. Louis and Harvard he went to the University of California as a professor of biochemistry in 1918. In 1922 he became professor of biochemistry in the School of Medicine and Dentistry, University of Rochester, where he remained until his retirement in 1947. Dr. Bloor is best known for his work in the determination of and metabolism of lipides.

After accepting the honorary membership Dr. Bloor discussed various aspects in the training of the clinical chemist.

Other speakers at the dinner, presided over by John G. Reinhold, vice-president of the AACC, were in order of their appearance, Max Strumia, Associate Professor at the School of Medicine of the University of Pennsyl-



Left to right: Warren H. Sperry, professor Walter R. Bloor, and John G. Reinhold, at the annual dinner of the Association at Philadelphia.

Courtesy of Chemical and Engineering News

### CLINICAL CHEMIST GETS NEW EDITORIAL BOARD

A change in editorial policy for The Clinical Chemist was announced by the Executive Committee of the American Association of Clinical Chemists at the annual business meeting in Philadelphia on April 11. Andre C. Kibrick, who was forced to resign as editor because of other duties, has been replaced by an Editorial Board under the chairmanship of Harold D. Appleton, formerly associate editor. Serving with him will be Max Friedman and Roy W. Bonsnes.

Marjorie Prager, who has had professional newspaper experience, has volunteered to take the post of manager. Contributing editors, representing the local sections of the AACC, will include Ellenmae Vieregiver, secretary of the Philadelphia Section, Arnold Ware of the Southern California Section and Ilona D. Lesnyak of the Boston Section. Other appointments will be announced as they are made by the chairmen of the local sections.

The Clinical Chemist will continue to be published every two months. All future communications should be addressed to: The Clinical Chemist, P.O. Box 123, Lenox Hill Station, New York 21, N.Y.

### EXECUTIVE COMMITTEE MEETS IN PHILADELPHIA

A meeting of the Executive Committee of the American Association of Clinical Chemist was held at the 3R Restaurant in Philadelphia on the evening of April 11.

A resolution was adopted expressing disapproval of the marketing of stand-and solutions and pre-calibrated colorimeters to those laboratories which do not have the skills for their own standardizations and calibrations on the basis that such practices contribute to irresponsible work by those laboratories.

A discussion was held concerning evaluation of methods and the Committee on Methods, under the chairmanship of Miriam Reiner, was instructed to proceed with the publication of an annual compendium of methods approved by the AACC and a critical study of the several procedures.

It was voted to hold the Third Annual Meeting of the Association in conjunction with the 119th National Meeting of the American Chemical Society either in Boston or Cleveland.

\* \* \*

## THE CLINICAL CHEMIST

P.O. Box 123  
Lenox Hill Station New York 21, N.Y.

EDITORIAL BOARD  
Harold D. Appleton, *Chairman*  
Max Friedman — Roy W. Bonsnes  
*Managing Editor*  
Marjorie Prager

CONTRIBUTING EDITORS  
Ilona D. Lesnyak, *Boston Section*  
Ellenmae Vieregiver, *Philadelphia Section*  
Arnold Ware, *Southern California Section*

*Views expressed in the editorials and opinions advanced by contributors do not necessarily represent the official position of the American Association of Clinical Chemists.*

### NEW PLANS FOR NEWSLETTER

With this issue The Clinical Chemist undergoes a change in personnel. It was with real regret that the Executive Committee of the American Association of Clinical Chemists was forced to accept the resignation of Andre C. Kibrick who was no longer able to spare the time from his numerous other duties to devote to the editorship. Fortunately, Harold D. Appleton, who was associated with him in the successful launching of the publication was persuaded to accept the position of chairman of the Editorial Board where he will be able to continue giving us the benefit of his experience.

A vote of thanks from the entire organization is due to both men for the many hours of hard work that they spent in bringing out The Clinical Chemist during the last twelve months.

This past year has seen many developments in the AACC. A rapid growth in membership has brought about the formation of local sections in many parts of the country; and The Clinical Chemist would like to know what our individual members are doing. We feel that your current publications, new status of employment, promotions and awards are of interest to the rest of the Association and we hope to publish such news in a personal column so please send us all such items about yourself or other members. In addition we would like to get letters from you on topics or opinions of interest to other clinical chemists and we plan to print them as space permits. However, since this is

### "MENACE IN THE MEDICAL LABS?"

Last March a full page advertisement in many of the papers hereabouts proclaimed in large type "Menace in the Medical Labs", as described by Albert Deutsch, feature writing journalist, in the April 1950 issue of the Woman's Home Companion. Quoting the author of the "Menace", "The purpose of this article is not to destroy public confidence in our medical laboratories..." Yet it contains a series of recitations of mistakes and blunders which can and do occur in such laboratories. Of course this is the way "not to destroy public confidence."

We doubt that such scare advertisements and scare articles will aid matters much, even if conditions are as bad as this account makes them seem. Furthermore, we question the wisdom of professional people who aid and abet the writing of such an article. We doubt, too, that it will help them much in attaining their objectives. We should like to challenge them to produce objective data to support their contentions instead of a series of isolated cases.

Mr. Deutsch's ostensible objective in writing this article was to give aid to those inveighing against "...the fatal errors that could easily be avoided". For, he says, "Today there are individuals and agencies working to correct this dangerous situation as rapidly as possible. They need public support. I hope this article will stimulate that support." The agency to which he refers, The United States Public Health Service's Laboratory Division at the Communicable Disease Center in Atlanta, Georgia, already has public support — the taxpayer's money.

As for the journalist; we are sure Mr. Deutsch, whom we should classify as a liberal from his past writings, would be surprised if he knew that he had written a nice piece of propaganda for a conservative and monopolistic

still a small newsletter it is necessary to limit all such correspondence to 250 words. If you have any other suggestions for improvement or change in this publication they will be most welcome.

segment of the medical profession. He could not have done better if he had been their paid press agent.

Poorly trained and poorly paid technicians, according to Mr. Deutsch's article, are held to be responsible in part for the situation which he describes. We shall admit that some are poorly paid, others poorly trained, some perhaps both. But if their results in the laboratory are not satisfactory they cannot be blamed. For such technicians should be supervised by professional people who can evaluate their work and who must be held directly responsible for the results. If those in charge of laboratories at the professional level do not have the knowledge, the skill, the desire and the time to train technical assistants they have no right to try to supervise the work of such technicians.

Better trained, better paid technicians even of the kind approved by the clinical pathologists are not an answer — although they would make life simpler for those responsible for their work. Instead, some of the problems of the laboratories which render ancillary services to the medical profession will be solved when certain segments and groups within the medical profession come to the full realization that some of the work in the field of medical science can best be carried out with the active cooperation of professionally trained bacteriologists, chemists, histologists, parasitologists, physicists and the like. When these specialists are to be selected for medical laboratories their competence should be judged by other professionally trained bacteriologists, chemists, histologists, parasitologists and physicists, and not by those unable to evaluate their ability. Once they are selected they should be accorded, in the thinking of the physician, the proper credit for their professional work. This is not theory. In some few places individuals in the medical profession have already come to this conclusion.

As for our technicians, let us not ask more of them than they are prepared to give, and let us not blame them as others apparently are doing for their shortcomings. For they will only be reflections of our own shortcomings.



## Dr. Bloor Honored At Annual

### Dinner

vania and Director of Laboratories at the Bryn Mawr Hospital; Walter J. Murphy, Editor of the Chemical and Engineering News of the American Chemical Society and director of its news service; J.W.F. Harrison, Assistant Professor of the Philadelphia College of Pharmacy; Warren M. Sperry, Associate Professor of Biochemistry at the College of Physicians and Surgeons, New York, and principal research chemist of the New York State Psychiatric Institute; and Harry Sobotka, Chemist to The Mount Sinai Hospital, New York, and president of the AACC.

Dr. Sperry, who is chairman of the Committee on Clinical Chemistry (ACS and ASBC), reminisced on his student days in the laboratory of Dr. Bloor in Rochester and discussed the problems in the certification of clinical chemists.

Professor Harrison, as a representative of the American Board of Clinical Chemists, spoke on the same topic.

The clinical pathologist's side was presented by Dr. Strumia who had been invited to give his views on the relationship between chemists and pathologists particularly in respect to the controversial issue of who shall be permitted to head clinical laboratories.

As final speaker Dr. Sobotka gave a talk entitled "A Survey of Chemical Tests for Malignancy." In developing his thesis of the inadequacy of present chemical tests for cancer in determining the existence of a malignancy in the patient he said, "It seems undesirable indeed to put a tool of this nature into the hands of physicians, a great many of whom rely for their diagnosis on laboratory tests, interpreted for them by the laboratory men; it seems even worse to keep the public and the patient in the belief that such a yes-or-no test exists when in fact it does not." In surveying the present tests he saw most promise in an approach based on a tumor-specific enzyme system, while cautioning against a "discreditable precedent" for future chemical tests which would occur if the present untried ones are used unwisely.



*Max Strumia, (on the left) discusses professional problems with Harry Sobotka, at the annual dinner in Philadelphia.*

Courtesy of Chemical and Engineering News

### SYMPOSIUM ON THE EFFECTS OF STEROIDS ON MAMMALIAN METABOLISM

One of the highlights of the Philadelphia Meeting of the American Chemical Society was the Symposium on The Effects of Steroids on Mammalian Metabolism, which was held on Tuesday, April 11. This symposium was sponsored by the Division of Biological Chemistry upon the suggestion of the program committee of the American Association of Clinical Chemists.

Anthony A. Albanese, of St. Luke's Hospital, New York, the symposium chairman, started the proceedings by stating that the objectives of the meeting were to review present day knowledge of steroid action on metabolic processes, in light of better understanding metabolic effects of steroids, to decrease undesirable side effects, and to determine optimum dosages. By this knowledge an increase in therapeutic value of these steroids may be achieved.

A discussion of the effects of steroids on carbohydrate metabolism was presented by Dwight J. Ingle, of the Upjohn Company. He stated that rat experiments showed that adrenal insufficiency would give an increase in carbohydrate tolerance during rest or mild activity. During very active periods the presence of cortical hormones is necessary in order to

reach maximum carbohydrate utilization.

Mobilization of depot fat in metabolism was discussed by Louis Levin of Columbia University. Dr. Levin suggested the existence of a pituitary factor which controls the mobilization of fat depots to the liver. There is evidence that this factor works in harmony with the adrenal cortex, as it has no effect if the adrenal glands are removed. On these adrenalectomized animals the action of this factor is enhanced by adreno-cortical hormones. By similar experiments it was shown that ACTH does not have the same route of action.

Drs. Albanese and Reginald A. Higgins showed that the use of a male sex hormone derivative, testosterone propionate, speeds up the growth of all individuals where a growth potential exists. Patients treated with this compound show an increase in urinary amino nitrogen and a decrease in urea. This evidence suggests that the action of this steroid derivative causes a decrease in tissue destruction rather than an increased rate of protein anabolism.

Charles D. Kochakian of the University of Rochester, presented his work on the effect of steroids on arginase. This enzyme is a factor in the formation of urea. Dr. Kochakian's findings are in keeping with similar work reported on the action of steroids on the phosphatases.

# Local Section Reports

## NEW YORK SECTION

The speaker, at the New York Section's fourth and final meeting of the season, held on May 31 at the Woman's Clinic of the New York Hospital, was Dr. William H. Summerson, Chief of the Biochemistry Section, Medical Division, Army Research Center at Edgewood, Md. His topic was "The Current Significance of Choline Esterase".

Dr. Summerson is, perhaps, most widely known as the Summerson of the filter photometer which he fathered and which bears his name. He is also known to those who have used the Warburg apparatus as the inventor of the Summerson constant volume differential manometer. He is co-author with Philip Hawk and Bernard Osser of the book, "Practical Physiological Chemistry", which contains descriptions of many methods of interest to clinical chemists. Dr. Summerson was, in large part, responsible for the selection and evaluation of many of these methods.

His research activities have been concerned with studies of copper in nutrition, analytical methods, the metabolism of normal and tumor tissues, and more recently, with the biochemical action of toxic compounds. Dr. Summerson received his baccalaureate degree in 1927, his M.A. degree in 1928, both from Cornell. He became an instructor in biochemistry at the Cornell University Medical College in New York City in 1929. Concurrently he worked for his Doctor of Philosophy degree which he received under Dr. Stanley Benedict in 1937. In 1939 when Dr. Vincent du Vigneaud became professor of biochemistry he was promoted to assistant professor and in 1946 to associate professor of biochemistry. He left Cornell to accept his present position in 1947.

During the war he served as a civilian with the Office of Scientific Research and Development.

In his talk Dr. Summerson defined a choline esterase as an enzyme which catalyzes the hydrolytic splitting of the powerful drug acetylcholine into acetic acid and choline. Several kinds

can be distinguished by their differing physiological action. Their distribution in the animal body is wide, but chief interest has been directed to the study of their presence in nervous tissue, blood plasma, and erythrocytes. Choline esterase activity can be quantitatively determined in blood and tissues. Histochemical procedures serve to localize the enzyme in cells and cell components. Diisopropyl-fluorophosphate (DFP) and certain powerful insecticides which specifically inactivate the enzyme, have served as valuable tools in assessing the significance of choline esterase to the animal body.

He went on to say that recent work has indicated that the plasma cholinesterase is produced by the liver. The measurement of the rate of regeneration of the plasma enzyme after experimental or pathological depletion may thus be an index of liver function. Choline esterase estimation may, therefore, soon become a routine determination in the clinical chemical laboratory.

## Boston Section

The members of the Boston Section of the American Association of Clinical Chemists held their last meeting of the season at the New England Center Hospital on May 10. A dinner preceded the meeting at which 23 members were present. The speaker was William Schwartz of the Children's Hospital and Harvard Medical School, and the subject was on "The Importance of Electrolyte Balance in Modern Medicine".

The section chairman, Joseph Benotti, reviewed the highlights of the American Chemical Society meeting in Philadelphia for the benefit of the members who could not attend. The aims and accomplishments of the AACC committee were discussed, and a special interest was shown in the plan for the standardization of laboratory procedures and in the forthcoming laboratory manual.

Mr. Benotti reports that a new course in clinical chemistry leading to an M.S. degree will be given at the Tuft's Medical School under the direction of Halvor Christensen. The practical work in clinical chemistry will be done at the New England Center Hospital.

At a previous meeting held on March 15 at the New England Center Hospital the Boston Section heard Mario Stefanini, M.D., talk on the "Coagulation of Blood and the Diagnosis of Hemorrhagic Diseases Due to Abnormalities of its Mechanism".

Dr. Stefanini is a Fellow in Hematology at the New England Medical Center and a Damon Runyon Clinical Research Fellow.

In his talk he pointed out that the coagulation of blood is a complicated process. Its actual mechanism is now visualized as a complex dynamic process, controlled by the opposite activity of positive and negative forces.

According to Dr. Stefanini the coagulation of the blood can be divided into three phases. First thromboplastin is formed through the action of an agent supplied by the blood platelets (thromboplastinogenase) on the precursor of thromboplastin (thromboplastinogen) occurring in the plasma.

Then thromboplastin acts on prothrombin, with the aid of calcium and a labile factor (Factor V or plasma Ac-globulin) to form a limited amount of thrombin. The thrombin formed then initiates two chain reactions. In one it lyses platelets increasing the amount of thromboplastinogenase and thus of thromboplastin; in the other thrombin converts the labile factor into a new agent which can be found in the serum and which is called the activated labile factor (serum-Ac-globulin, or Factor VI). This factor is capable of accelerating greatly the conversion of prothrombin to thrombin.

Finally enough thrombin is formed to cause the formation of fibrin from fibrinogen in sufficient amount to give a solid clot.

"Anticoagulant" agents oppose each of these three phases. An antithromboplastinogenase tends to prevent the platelet factor from acting on thromboplastinogen, and an antithrombin tends to prevent thrombin from converting fibrinogen to the fibrin of the clot. Once the fibrin clot is formed a fibrinolysin tends to disintegrate it. Very little fibrinolysin is ordinarily activated. It is formed from an inert proenzyme, profibrinolysin, through the action of kinase liberated by damaged tissues. However an antifibrinolysin and the accumulation of the products



of fibrin digestion antagonizes the activity of fibrinolysin when fibrinolysin is produced in excess.

All these factors and phases should be investigated analytically, Dr. Stefani said, when a hemorrhagic condition due to deficiencies of the clotting mechanism is being studied. The tests required outlined and a method for obtaining proper blood specimens was indicated. All the necessary tests can be carried out on 20 ml of blood.

#### Philadelphia Section

Donald A. Sutherland, 1st Lt. M.C., now stationed at the Valley Forge General Hospital was the speaker of the fourth scientific meeting of the Philadelphia Section of the Association on March 28, 1950. Dr. Sutherland's talk was entitled "Porphyrins: A survey of the clinical significance of porphyrins and of laboratory procedures for study of porphyrin pigment metabolism".

The speaker first outline porphyrin chemistry with special emphasis on the basic nomenclature and the methods for identifying these compounds. Their place in human physiology was then indicated. A method for the determination of total coproporphyrin in human urine was presented with a method of the determination of coproporphyrin I and III. The difficulties and the errors involved in carrying out these procedures was discussed. Dr. Sutherland then went on to discuss the role in human metabolism of type III porphyrin as contrasted to that of type I. The talk closed with a discussion of the theory of the possible significance of coproporphyrin excretion in acute alcoholism and cirrhosis of the liver.

Dr. Sutherland received his academic training in Minnesota. He graduated from Macalester College, St. Paul in 1944 *cum laude*, and then went on to obtain his M.D. degree at the University of Minnesota Medical School in 1947. The next two years were spent at the Minneapolis General Hospital as Intern and Resident Fellow in Internal Medicine. During 1948-'49 he worked on the medical service of the University of Minnesota Hospital, leaving there in July, 1949, to accept his present position as Ward Officer at the Army Hepatic and Metabolic Center, Valley Forge General Hospital.

#### NEW MEMBERS AS OF MAY 10, 1950

Adams, George A.: Langner Laboratory, Philadelphia, Pa.  
Alles, Gordon A.: University of California Medical School, San Francisco, Cal.  
Armstrong, S. Howard: University of Illinois Medical School, Chicago, Ill.  
Becker, Robert: Boston City Hospital, Boston, Mass.  
Beltz, John H.: Bell and Beltz Laboratory, Philadelphia, Pa.  
Beltz, Marvin F.: Bell and Beltz Laboratory, Philadelphia, Pa.  
Bergental, Delbert M.: University of Chicago, Chicago, Ill.  
Brown, Virginia: Lancaster General Hospital, Lancaster, Pa.  
Byers, Walter H.: Veterans Administration Hospital, Hines, Ill.  
Carne, Herbert O.: Veterans Administration Hospital, Van Nuys, Calif.  
Carrel, Ralph: Lattimore Labs, Sedalia, Mo.  
Coleman, George J.: Coleman Laboratory, Wheeling, W. Va.  
Danielson, Bernice: Childrens Hospital, Denver, Colo.  
Durham, W. F.: Emory University, Emory University, Ga.  
Finch, Edmund P.: Veterans Administration Hospital, Hines, Ill.  
Gawron, Oscar: Duquesne University, Pittsburgh, Pa.  
Goodman, Joseph H.: Veterans Administration Hospital, Brentwood, Calif.  
Hamilton, Robert H.: Temple University Medical School, Philadelphia, Pa.  
Hisey, Alan: University of Alabama, University, Ala.  
Hoobler, Icie M.: Childrens Fund, Detroit, Mich.  
Jones, Vera J.: University of Kansas Hospital, Kansas City, Mo.  
Kanter, Saul S.: Veterans Administration Hospital, Brentwood, Calif.  
Kormunda, Libbie: University of Chicago Clinic, Chicago, Ill.  
Krauel, Kathryn K.: 8018 36th Ave., N.E., Seattle 5, Wash.  
Landau, Richard L.: University of Chicago, Chicago, Ill.  
Loughead, Ruth: Billings Hospital, University of Chicago, Chicago, Ill.  
Mar, Peter G.: St. Joseph Hospital, Victoria, B.C., Canada.  
McDonald, Hugh J.: Loyola University, Chicago, Ill.  
McGhee, Eva C.: Emory University, Emory University, Ga.  
Mirkin, Abraham: Mirkin Analytical and Pathological Lab, New York, N.Y.  
Molnar, Julius: Fine Organics, Inc., New York, N.Y.  
Molnar, Nicholas: Fine Organics, Inc., New York, N.Y.  
Remie, Norma: University of Chicago Medical School Lab., Chicago, Ill.  
Rosoff, Samuel J.: Rosoff Laboratory, Philadelphia, Pa.  
Roth, Louise K.: Michael Reese Hospital, Chicago, Ill.  
Sycheff, Vladimir M.: Veterans Administration Hospital, Palo Alto, Calif.  
Thorpe, Donald E.: 230 16th St., Paso Roble, Calif.  
Wang, Chi Che: Veterans Administration Hospital, Hines, Ill.  
Ware, Arnold G.: Los Angeles County Hospital, Los Angeles, Calif.  
Weisberg, Harry F.: Mount Sinai Medical Research Foundation, Chicago, Ill.  
Weiss, Benjamin: Harper Hospital, Detroit, Mich.  
Wheeler, Joanna X.: Veterans Administration Hospital, Hines, Ill.  
Wilson, Frederick H.: 6401 Wissahichon Ave., Philadelphia, Pa.

#### ANNUAL MEETING HELD

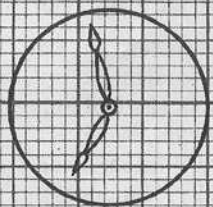
Members of the American Association of Clinical Chemists assembled on April 12 at the Ritz-Carlton Hotel in Philadelphia for their Second Annual Meeting.

During the session George T. Lewis, Professor of Biochemistry at Emory University, discussed the status of clinical chemistry in the south.

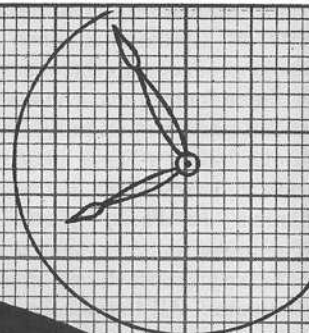
Committee reports were heard from Louis B. Dotti, treasurer of the organization; Warren M. Sperry, chairman

of the Survey Committee, who told of the progress being made by the New York City Hospital Survey; Miriam Reiner, secretary of the Membership Committee, who revealed that membership is reaching the three hundred mark; and Harry Sobotka, chairman of the Legislation Committee and president of the AACC.

It was announced during the proceedings that membership certificates will be available to those interested in obtaining them at a cost, as yet undetermined, to the recipient.



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# The CLINICAL Chemist

NEWSLETTER OF THE AMERICAN ASSOCIATION OF CLINICAL CHEMISTS, INC.

VOLUME 2 NUMBER 4

JULY 1950

## Method Committee Reports Standard Methods Plans

The Committee on Methods composed of Miriam Reiner, Chairman, Michael Somogyi, Ph.D., Chemist to The Jewish Hospital of St. Louis and Margaret Kaser, Ph.D., Biochemist, Veteran's Administration Center, Woods, Wis. reported at the last Executive Committee meeting held on June 15th in New York City on their plans for a procedure for the standardization of chemical methods used in clinical laboratories and for the publication of these methods once they are standardized.

The committee has decided to follow a procedure which could be said to be much like that followed by Organic Syntheses, published by John Wiley and Sons. Methods selected for publication will be checked and evaluated in several different laboratories. Those methods found satisfactory will be published in volumes which will appear at regular intervals, of perhaps one year. Each such volume will have an editor in chief and an editorial board. Such a procedure will make it possible to evaluate and to standardize new and better methods as they appear.

Methods most frequently carried out will be evaluated first. Whenever possible, two or more methods will be presented. Methods starting with both macro and micro quantities of blood, plasma or serum will be included.

The Editor in Chief for the projected first volume of this series will be Miriam Reiner. Her Editorial Board will consist of Alma Hiller, Ph.D., Associate Attending Biochemist, Rush Department of Biochemistry Presbyterian Hospital of the City of Chicago;



Miriam Reiner, Chairman of the Methods Committee.

## REINHOLD TO ORGANIZE LABORATORY IN JAMAICA

John G. Reinhold, Ph.D., Associate in Charge of Chemistry at the William Pepper Laboratory of Clinical Medicine, University of Pennsylvania Hospital, Philadelphia, left for Jamaica, B.W.I., on June 15th to organize the Hepatic Test and Nutrition Laboratory for the University College of the West Indies at Kingston, Jamaica.

Sponsored jointly by the University of Pennsylvania and the University Hospital, the laboratory will be used for nutritional studies in liver diseases.

Dr. Reinhold, who is vice-president of the AACC, was accompanied by his wife. The task of setting up the new laboratory is expected to take about a month and he hopes to return to Philadelphia late in July.

## Brodie Appointed to Heart Institute Post

Bernard B. Brodie, Ph.D. Associate Professor of Biochemistry, New York University College of Medicine was appointed Director of the Chemical Pharmacology Section of the National Heart Institute. This was announced by Surgeon General Leonard A. Scheele of the Public Health Service, Federal Security Agency and the Acting Federal Security Agency Administrator, John L. Thurston.

The Chemical Pharmacology Section is the first of three laboratory sections which will be devoted to basic research conducted within the National Heart Institute as part of the intramural research program under the general direction of Dr. James A. Shannon, Associate Director (for research).

Dr. Brodie, in his new position, will be responsible for planning and directing investigations aimed towards the development and logical clinical application of therapeutic agents. Born in Liverpool, England in 1909, Dr. Brodie received his B.S. degree in 1931 from McGill University, Montreal, Canada, and his Ph.D. from New York University in 1935. He is a Research Associate of the Goldwater Memorial Hospital, a member of the American Association of Clinical Chemists, American Society of Biological Chemists, The American Society of Pharmacology and Experimental Therapeutics, The Harvey Society, Sigma Xi, the New York Academy of Sciences and the Society of Experimental Biology and Medicine.

Assisting Dr. Brodie in his new research section will be two unit directors, Sidney Udenfriend, Ph.D., Assistant Professor of Biochemistry at the Washington University School of Medicine, St. Louis, and Julius Axelrod, Research Chemist with the New York University Medical School.

(Cont'd on page 6)

\* \* \*

## THE CLINICAL CHEMIST

Newsletter of the American Association  
of Clinical Chemists, Inc.

P.O. Box 123  
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of the American Association of Clinical  
Chemists.*

VOL. 2 No 4

July 1950

### OUR AIMS ARE THESE

Just what sort of an organization is this American Association of Clinical Chemists? What is its purpose? These are questions we have been asked many times. They have been answered, in part, before in *The CLINICAL CHEMIST*. But they can be answered again.

Article II of our constitution states, "In the interest of the public welfare, it is the aim and object of this Association to raise the level at which chemistry is practiced in the clinical laboratory; to stimulate the development of new chemical methods for use in the clinical laboratory; to encourage highly trained chemists to enter the field of clinical chemistry; to encourage those engaged in this field to pursue advanced studies so as more effectively to render service to the public, and to create and maintain a forum where chemists engaged in applying the science of clinical chemistry may exchange ideas and information concerning their scientific, technical and professional problems."

In their broadest sense these same aims could be said to be held by the American Chemical Society. What then can a small, young society accomplish which cannot be accomplished by the larger, older organization?

The exact answer to this question is not known. But we can discuss what it might be.

Members of the American Chemical Society have in the past and still do tackle the problems of clinical chem-

## LETTERS PLEASE!

In our last issue we requested you, the individual members of the AACC, to send *THE CLINICAL CHEMIST* news about yourselves or other members. So far the response has been disheartening. One of the purposes of a newsletter such as ours is to keep the people in our organization in touch with each other. No item of news about your professional life is too small to be of interest to the rest of us. We like to hear about your new appointments, publications, awards, promotions, research grants and such. But we are not omniscient. We cannot know what is happening to you unless you write and tell us about it.

Another purpose of *THE CLINICAL CHEMIST* is to become an organ of public opinion on matters concerning clinical chemistry. Here too we cannot guess what you think about any subject unless you write to us (in letters of not more than 250 words so we can print them in their entirety). But above all, please, please write!

Some of these individuals have been and are, well informed about, and interested in, these problems. Not so others who have been and are involved. Very few have been or are working clinical chemists.

Being working clinical chemists, we are cognizant, at first hand of the scientific, social, economic and professional problems of clinical chemists. We cannot expect others to know our problems as well as we know them ourselves. Nor can we really expect others to be vitally interested in them if we aren't ourselves. Yet, until this Association was formed, there was no group which could speak authoritatively for clinical chemists.

By not only organizing, but by being active, alive and fecund, we can show our chemical colleagues that we are interested in our problems, and that we are also able and willing to shoulder some of the responsibilities associated with these problems. Thus we can aid the American Chemical Society in its work in the interest of all chemists when it needs information, advice or even correction about the clinical chemist.

## NEW MEMBERS AS OF JUNE 29, 1950

Bloch, Alfred; Highland Park, N.J.  
Current, Hazel; Santa Monica, Calif.  
Foster, William C.; Philadelphia, Pa.  
Klasinski, Helen M.; Leavenworth, Kan.

Lewis, Merle Lovell; Los Angeles, Calif.

Lind, Howard S.; Brookline, Mass.  
Michaelis, Noritz; New York, N. Y.  
Mulay, Ambadas S.; Bethesda, Md.  
Osgood, Harlow S.; North Girard, Pa.  
Perley, Anne M.; St. Louis, Mo.  
Rivera, Jose A.; Phoenixville, Pa.  
Rockenmacker, Morris; Berkeley, Calif.  
Turner, Elvin E.; Dubuque, Iowa.  
Woodson, Harold W.; Chicago, Ill.

## QUIDNUNCS

Hazel Current of Santa Monica, California, was elected president of the California Society of Medical Technologists) at the annual convention of the Society held recently in Berkeley, California. She attended the national convention of the ASMT held in Houston, Texas, from June 11th to June 15th as one of the four delegates from California.

\* \* \*

Ferdinand Stern, Ph.D., of Detroit has accepted the directorship of the Clinical Laboratories of the Brent General Hospital, Detroit. In addition he opened his own clinical and research laboratories on July 1st in connection with the West Detroit Clinics, at 15214 Livernois Ave., Detroit 21, Mich.

\* \* \*

Roy W. Bonsnes, Ph.D., of New York City has been promoted to Associate Professor of Biochemistry in the Department of Biochemistry and Associate Professor of Biochemistry in Obstetrics and Gynecology at the Cornell University Medical College. He will continue as Chemist at the Women's Clinic of the New York Hospital.

\* \* \*

Kurt Stern, Ph.D., of New York City will have a laboratory at the Marine Biological Laboratory, Wood's Hole, Mass., for the summer.

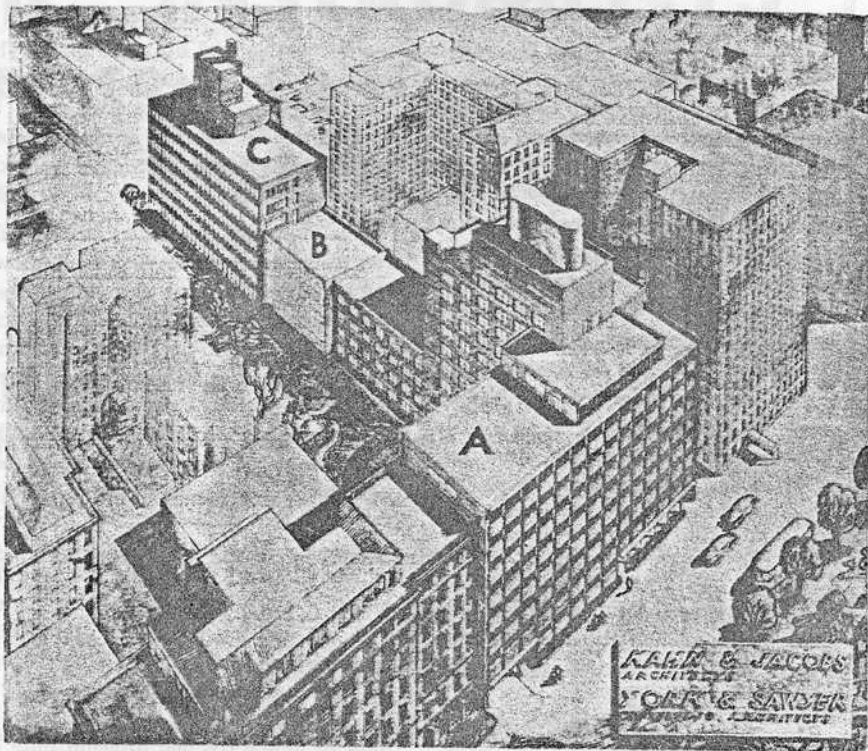


## Laboratories at Mount Sinai, New York to be Housed in Proposed New Buildings

A committee appointed by the American Association of Clinical Chemists at the invitation of Marcus D. Kogel, M.D., Commissioner of Hospitals of the City of New York has just completed a survey of the status of clinical chemistry in the New York City Department of Hospitals. A report of their findings, containing a complete analysis of the services available in clinical chemistry to the Department of Hospitals will be submitted to Dr. Kogel by October 1st. It is hoped by the committee that such a study will serve as a model for other municipalities with problems similar to those in New York.

The committee is under the chairmanship of Warren M. Sperry, Ph.D., Associate Professor of Biochemistry at the College of Physicians and Surgeons, New York, and principal research chemist of the New York State Psychiatric Institute. Other members include Roy W. Bonsnes, Ph.D., Chemist of the Women's Clinic, New York Hospital, and Associate Professor of Biochemistry, Cornell University Medical College; Max M. Friedman, Ph.D., Senior Chemist at Queen's General Hospital and Instructor in Biochemistry at Queen's College; Israel S. Kleiner, Ph.D., Professor of Biochemistry at New York Medical College; and Harry Sobotka, Ph.D., Chemist at the Mount Sinai Hospital, New York.

The New York City Department of Hospitals operates 24 municipal hospitals with a total capacity of 20,000 beds as well as active outpatient departments. In addition there are several hospitals under construction. A four part questionnaire covering laboratory space and equipment, laboratory work and personnel, chemical procedures and training of clinical chemists was sent by the committee to each institution. Several months of careful study were given to the analysis of the data obtained and an open meeting was held to which chemists in charge of the various laboratories were invited to contribute their comments.



Plans for a new eight story laboratory building as well as a building for temporary research projects and a new maternity wing have been drawn up for Mount Sinai Hospital, New York City, by the architectural firm of Kahn and Jacobs in conjunction with York and Sawyer, Consulting Architects. Construction has already begun and will be completed in about a year.

Located on the south west corner of Madison Ave. and 99th St. the new laboratory (marked C on the above architectural sketch) will house the Departments of Chemistry, Physics and Bacteriology. Two floors covering more than 10,000 square feet each have been allocated to the Chemistry Department, and will include besides, the routine laboratories, research facilities for radio-active tracer work, endocrinology, nutrition, microbiological chemistry, pharmacology, chemotherapy, physical chemistry and surface chemistry. Part of the premises, including the routine blood laboratory,

will be air conditioned. In addition there will be two floors of animal rooms for the use of the entire building.

The present laboratory building (a three story structure in the foreground of the sketch opposite B) will be taken over by the Department of Pathology.

Facilities for temporary research projects by members of the hospital staff will be housed in the projected Henry B. Berg Building (B).

The laboratories of the Mount Sinai Hospital are organized in four independent departments; Chemistry, Bacteriology, Pathology and Physics. All research activities are assigned to one of these departments for supervision and administration. The present staff numbers over 170 full time workers and almost an equal amount of physicians participating in laboratory work on a part-time basis.

The structure marked A on the accompanying sketch is the new maternity wing.

# Belk and Sunderman—An Abstract Followed By Editorial Comments

*The article by Belk and Sunderman has been widely cited as evidence for poor quality of analytical work carried out in clinical laboratories. The editors feel that it is pertinent to our purpose to examine critically the data presented therein, although the article was published nearly three years ago. We suggest that each member of the Association read the original article for himself. However in many cases the journal may not be readily available. We have, therefore, tried to abstract it as objectively as possible. Our comments are made in the editorial following the abstract.*

\*\*\*

An abstract of "A Survey of The Accuracy of Chemical Analyses in Clinical Laboratories" by William P. Belk, M.D. and F. William Sunderman, M.D. : American Journal of Clinical Pathology, 1947, 17, 853.

This survey was carried out by the Committee on Laboratories of the Medical Society of the State of Pennsylvania. The committee consisted of Henry F. Hunt, M.D., George R. Lacy, M.D., Verner Nisbet, M.D., Lloyd E. Wurster, M.D. and William P. Belk, M.D., chairman. F. William Sunderman, served as referee for this survey.

The object of the survey was "to check the accuracy of some of the more common chemical measurements made in hospital laboratories throughout the state".

The purpose of the survey was explained to the pathologists of the state by letter. Fifty nine agreed to cooperate. Two hospitals in New Jersey and one in Delaware were included in this number.

Two aqueous solutions of glucose, urea and calcium, and three of chloride containing amounts comparable "to those found in human blood"; one serum for determination of total protein, albumin and globulin; and two samples of citrated whole blood for the measurement of hemoglobin concentration were sent to the participants. The referee found the samples to have re-

mained unchanged during transit. The samples were sent out in two different batches; one in September, one in October. The results were reported anonymously by mail to the chairman of the committee.

The data are presented in two tables and six figures. Table 1 shows the concentration of the substances in the samples sent out, with the values considered to be the maximum allowable deviation. These values "having been arbitrarily selected by the referee as being limits that should be maintained for satisfactory laboratory practice." These limits were considered to be: for hemoglobin, plus or minus 3%; glucose at 60 mg.% plus or minus 17%, at 375 mg.%, 8%; sodium chloride at 456 mg.% plus or minus 11%, at 642 mg.% plus or minus 8%; urea, plus or minus 11%; calcium at 6.6 mg.% plus or minus 8%, at 12.6 mg.% plus or minus 4%; total protein plus or minus 6% and albumin plus or minus 7%.

Table 1 also presents the number of "satisfactory" results; the number of "unsatisfactory" results and the number in "gross error" (not defined). (These are also included in the number of unsatisfactory results.) Summarized (by us, it is not done in the paper) 597 values were reported (there should have been 767 if all to whom samples were sent reported). Of these 274 (or 46%) were deemed satisfactory. The percentage of the number of reports deemed satisfactory in each individual case ranges from 20% to 68% of the total reported.

In Table 2 the laboratories are scored on their performance; one point being given each satisfactory determination. The mean weighted score (our calculation) of 52 laboratories is 3 out of a possible 7 in the September data, with no laboratory getting the maximum possible score of 7 or the minimum score of 0. The mean weighted score of 44 laboratories is 2.7 in the October data, with two laboratories getting the maximum possible score of

6 (all values within satisfactory limit and six laboratories getting the minimum score of 0 (no values with "satisfactory" limit).

Figures 1 through 6 show the data as frequency distributions for calcium, urea, sodium chloride, hemoglobin, glucose, and total serum protein and albumin.

The authors say, "The data presented in the tables and figures are self-explanatory. They should, however, be carefully scrutinized so that their full implications will not be missed."

When the data from this survey became available, the Pennsylvania Association of Clinical Pathologists sent a questionnaire to the clinical pathologists of the state asking why, in their opinion, the results of the laboratory work should be so inferior. "One hundred and six replied 95 of whom listed the factor that they considered important in Table 3".

Eighty two of these 95 pathologists listed "poorly trained technicians" as a "factor contributing to technical inaccuracies and other unsatisfactory conditions in clinical laboratories"; 80 listed "inadequate number of technicians"; 64 listed "lack of understanding between pathologist and staff"; 63 listed "poor equipment"; 57 listed "insufficient floor space".

• • •

## OUR REACTIONS

Before we became a member of the AACC we considered ourself a reasonably good analyst. We thought we could analyze a blood for sugar to get a good value. Sometimes our duplicates would even come out identical. We thought we could do the same for urea, non protein nitrogen, chloride and other blood constituents. But then we heard, we're not sure exactly when, of the Sunderman report. This report we gathered, showed that analyses carried out on "known" solutions in clinical laboratories were unsatisfactory, or so we heard. We were be-

(Cont'd on page 7)



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## LOCAL SECTION NEWS

Article X of the Constitution of the American Association of Clinical Chemists reads in part as follows:

"Local Sections of this Association may be formed by fifteen or more voting members in good standing in a geographical area.

Local sections may adopt rules for the government of their own business but they shall take no action inconsistent with the provisions of the constitution and by-laws of this Association."

At a recent meeting of the National Executive Committee the following points were clarified.

According to Article X and the interpretations placed on it by the Executive Committee, Local Sections may elect officers in any way they choose, hold business and scientific sessions, and maintain a treasury. They may issue an independent periodical whose editorial policy must have the approval of the National Executive Committee. The National Section and the Editorial Board of the Clinical Chemist must receive two copies each of each issue. Any publicity releases by a Section must be submitted in advance to the National Secretary. Any Section may incorporate in its State.

Members of the Association in a region become members of the Local Section on payment of dues to the National Treasurer which include a subsidy to the Local Section which is at the present time \$1.00 per member or associate member. Additional charges to a Local Section may only be assessed on a voluntary basis. Local Sections may not accept members who are not members of the Association, nor reject as members those who are members of the Association. The Officers of the Local Sections will have the duty to inform the National Executive Committee of any action by members which would call for disciplinary measures, will suggest whatever measures they consider adequate, and will carry out decisions reached by the National Executive Committee according to the Constitution and By-law.

Since the Local Sections are amply represented on the Executive Board, close cooperation between the Section and the National Body is assured.

## NOMINATING COMMITTEE TO MEET IN SEPTEMBER

The Nominating Committee of The American Association of Clinical Chemists; which will meet the second week in September for the purpose of selecting candidates for the Executive Committee and officers of the Association, has announced that it would welcome suggestions and recommendations from individual members. These are to be sent to Max M. Friedman, Queens General Hospital, Jamaica 2, N.Y.

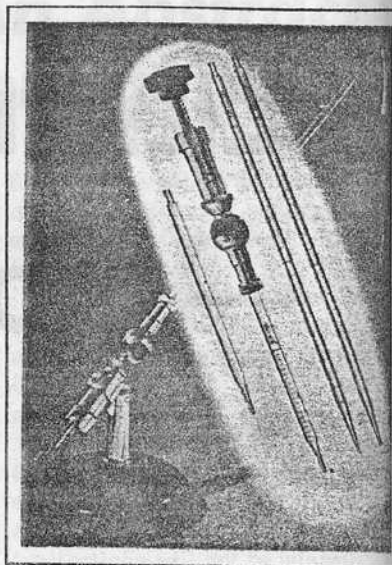
In accordance with the constitution of the Association the Nominating Committee must deliver to the secretary a list of nominees not later than 60 days before the annual meeting. The secretary must then mail ballots listing the nominees to the voting members 45 days before the annual meeting. The ballots have space for a write-in vote.

Besides Dr. Friedman the committee is comprised of Miriam Reiner, John G. Reinhold, Albert E. Sobel and Harry Sobotka.

## Method Committee Reports Standard Methods Plans

(Cont'd from page 1)

Dr. Kaser; G.R. Kingsley, Ph.D., Director of the Department of Clinical Chemistry, Veteran's Administration Center, Los Angeles; Samuel Natelson, Ph.D., Chairman of the Department of Chemistry, Rockford Memorial Hospital, Rockford, Ill.; L.F. Pierce, Ph.D., Director of the L.F. Pierce Laboratories, Los Angeles; M.H. Powers, Ph.D., Professor of Physiological Chemistry of the Mayo Foundation Graduate Medical School and Head of the Division of Biochemistry, Mayo Clinic, Rochester Minn.; Otto Schales, Ph.D., Director of Chemical Research and Director of the Department of Clinical Chemistry, Ochsner Medical Foundation, New Orleans; Albert E. Sobel, Ph.D., Adjunct Professor of Chemistry, Polytechnic Institute, Brooklyn; and Nelson F. Young, Ph.D., Assistant Professor of Chemical Pathology and Chief Chemist in Cancer Research and Metabolic Ward, Medical College of Virginia, Richmond, Va.



## NEW APPARATUS

The Volumette, a new apparatus designed for the controlled transfer and delivery of small volumes of liquid, is announced by Standard Scientific Supply Corp., New York. It is a micro burette and pipetter for use in serology, titrations and radioactive isotopes.

The parts are integrated to function separately as a hand or combined table unit, since the hand unit can be readily placed in a collar on a metal base support to supply the table burette support to supply the table burette. Intake and output on either unit are controlled by a micrometer knob that can be turned clockwise or counter clockwise to control the volume and hold the liquid at any desired point.

Plain or graduated burettes can be inserted instantly in the moulded rubber diaphragm; and plain or graduated pipettes can be connected quickly to the end of the burette with rubber tubing. Parts may be bought separately with a selection of "Pyrex" glassware to meet individual requirements.

The table unit has a 5½-pound base support that is finished in hammertone black. The post support provides seat for the diaphragm and plunger mechanism. It can rotate 360° horizontally and from normal position of 45° to 0° vertically.

\* \* \*



ginning to lose faith in ourself as an analyst. Probably that blood sugar we did yesterday on blood from a known diabetic was only 20 mg.% and not 400 mg.%; perhaps that potassium was 8 mEq./ liters and not 2.6. The night had dreams. We even thought of psychiatrists. But then we decided we should know more of this article. We approached it with many fears.

We found two authors, William P. Belk, M.D., and F. William Sunderman, M.D. Then we discovered that the survey was perpetrated by a committee, all M.D.s. We felt better - not a chemist in the group so far. We read on with a brighter spirit.

We learned that pathologists and clinical pathologists had been invited to participate in the survey. We felt still better. Still no chemists. The authors didn't say how many were invited - only that 59 accepted their invitations. And they didn't say, although the data is in table 2 of the article, that the maximum number to report was 52 in the September group of analyses and only 44 in the October group. We have no idea, then, as to what percentage of the total number of laboratories in Pennsylvania participated.

Further, the authors arbitrarily set limits - not a very scientific way to evaluate a method we thought. But we must remember, we said to ourself, these people don't admit to being chemists.

No attempt was made to evaluate the results in terms of the methods used for getting the values reported. We're sure that medical students are taught these days the necessity for this, particularly with respect to such determinations as glucose. But we must remember, we reminded ourself - these people don't admit to being chemists.

Yet they are evaluating chemical work.

When asked why their results were so inferior 82 of 95 pathologists (we wondered what happened to the other 11 answers) passed the buck in part to poorly trained technicians. Does this mean that they are unable to train the technicians themselves? Oh - we said to ourself you must remember that these people do not admit to being chemists.

*This story was omitted from the last issue for lack of space. Although a little dated, the editors considered that, because of the scientific data it contained, it still might interest some of you.*

The Forty-First Annual Meeting of the American Society of Biological Chemists was held in Atlantic City, N. J., April 17-21, as part of the general meeting of the Federation of American Societies for Experimental Biology. Among the many hundreds of papers presented at the sessions of the various scientific groups the following may be of particular interest to clinical chemists.

In a paper reported by Eugene Y. Berger, Bernard B. Brodie, Julius Axelrod, Marcelle F. Dunning, Yetta Porosowska and J. Murray Steele of the Research Service, Third (New York University) Medical Division at the Goldwater Memorial Hospital, New York City it was shown that n-acetyl 4 aminoantipyrine (NAAP) could be used for the measurement of total body water in man. The colorimetric procedure for this compound does not require the use of an ultraviolet spectrophotometer. NAAP is excreted quantitatively in urine, so that if its urinary excretion is measured, the volume of distribution may be calculated on the basis of a single plasma level.

Serum cholesterol concentrations in 2050 normal men of all age groups were measured by Ancel Keys, Olaf

We finished the article enheartened and gay. The word chemist had not been mentioned once. These bad results had been obtained by pathologists and clinical pathologists. Nothing startling about that we said to ourself - after all - these people don't admit to being chemists.

We're going to conduct a survey of our own. It will be limited to clinical chemists. All who wish to participate may write for necessary information. Our survey is going to be entitled "A Survey of the Accuracy of Microscopic Pathological Diagnosis by Clinical Chemists". We expect the results to be poor.

Mickelsen, Russell Hayes and Erna V. O. Miller of the Laboratory of Physiological Hygiene and the Students Health Service, University of Minnesota. The data demonstrated a marked curvilinear relation with minimal values in late adolescence, maximal values in the 50-60 year group and progressive decrements in old age.

O. H. Gaebler and William T. Beher of the Edsel B. Ford Institute for Medical Research, Henry Ford Hospital, Detroit, spoke on the conditions for the determination of neutral 17-ketosteroids in urine. Best results were obtained when 150 ml. aliquots were heated to boiling, acidified with 22.5 ml. conc. HCl, boiled for an additional 7 minutes and cooled rapidly. The Zimmerman reaction is then applied and the extinction measurement made at 515 mu. and 440 mu.

Alexander B. Gutman of the Columbia Research Service, Goldwater Memorial Hospital, and Department of Medicine of the College of Physicians and Surgeons, Columbia University, read a paper on a simplified serum alkaline and acid phosphatase method using phenolphthalein monophosphate as a substrate. Incubation for 14 minutes at a pH 8.7 or 35 minutes at pH 4.9 gives activities for serum alkaline and acid phosphatase equivalent to those obtained in one hour with B-glycerophosphate or phenylphosphate. The pink color is developed with  $\text{Na}_2\text{CO}_3$  and units of activity are read directly from a standard phenolphthalein transmittance-concentration curve.

Harold D. Appleton, Betty B. Levy, J. Murray Steele and Bernard B. Brodie of the Departments of Biochemistry and Medicine, New York University College of Medicine and Research Service, Goldwater Memorial Hospital, New York, described a specific procedure for the estimation of free choline in plasma. With this method as little as 5 micrograms of choline can be measured accurately. Choline is precipitated from a plasma extract after the removal of interfering substances by washing the extract with butanol. The precipitate is dissolved in ethylene dichloride. In this solvent the choline periodide absorbs light at 365 mu. Specificity is proven by counter-current distribution techniques.

# The CLINICAL Chemist

NEWSLETTER OF THE AMERICAN ASSOCIATION OF CLINICAL CHEMISTS, INC.

VOLUME 2 NUMBER 5

SEPTEMBER 1950

## Medical Personnel Needed By Army

The Medical Draft Bill, as proposed by Secretary of Defense Louis Johnson, authorizes the President of the United States to require special registration for "male persons qualified in needed professional, technical, scientific, specialists, and other scientific categories who have not yet reached the age of 45 at the time of registration."

Those fitting this definition who, on August 16th, were members of the reserves of any branch of the armed forces would not be subject to the draft.

In a special release to THE CLINICAL CHEMIST the Information Section of the Headquarters First Army announced that applications of qualified male and female personnel for Reserve commissions in the Medical Service Corps will be accepted in the grade of lieutenant only for the following: bacteriologists, biochemists, parasitologists, serologists, entomologists, nutritionists, toxicologists, industrial hygienists and industrial hygiene engineers, as well as optometrists, psychiatric social workers, psychologists, and sanitary engineers.

It was also announced that appointments in the same Medical Service Corps specialties will be made up to and including the rank of major for applicants who will accept immediately call to extended service.

For appointments in the grade of first lieutenant in any of the above fields applicants must meet one of the following three requirements:

(1) Possess a doctor's degree from a school or college acceptable to the Surgeon General in any of the medical allied sciences or in other related sciences for which there is a demonstrated need in the Medical Department.

(2) Possess a master's degree from a school or college acceptable to the Surgeon General, and have a mini-

(Cont'd on page 6)



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Dr. Walter R. Bloor

## MEMBERSHIP CERTIFICATES SOON TO BE MADE AVAILABLE

(Picture on Page 3)

After many inquiries and requests the Executive Committee has decided to have Membership Certificates made. They are 8 by 11 inches, printed in black on parchment paper with blue seals and are suitable for framing. They will be available to all classes of members of the American Association of Clinical Chemists at \$4.00.

The certificates will be ready in three weeks, but some time must be allowed for having the name inscribed. They may be obtained by sending a check or money order, made out to the American Association of Clinical Chemists, to Dr. Louis B. Dotti, St. Luke's Hospital, Chemistry Department, New York 25, N.Y.

## Bloor Honored By Lipid Symposium

Walter R. Bloor, Ph.D. was honored at a symposium on "The Biological Significance of Lipids" held September 13th and 14th at the University of Rochester School of Medicine and Dentistry under the sponsorship of the Robert Gould Foundation.

Dr. Bloor, who is professor emeritus of biochemistry at the University, was made first honorary member of the American Association of Clinical Chemists at the annual meeting held in Philadelphia last April. He is internationally known for his work on fat metabolism.

In addition to the symposium a small dinner was held in Dr. Bloor's honor on September 13th.

Arrangements for the symposium were in charge of Elmer H. Stotz, Ph.D., professor of biochemistry at the University, assisted by Frances L. Haven, Ph.D., associate in biochemistry and Dr. Bloor.

Warren M. Sperry, Ph.D., chemist of the New York State Psychiatric Institute, and a member of the AACC, was invited to read a paper on "Cholesterol and Cholesterol Esters in Serum". Dr. Stotz gave a paper entitled "Enzymatic Oxidation of the Fatty Acids" and Dr. Haven discussed "Lipids in Tumors".

The symposium opened with a discussion of Lipid Structure and Properties with papers by B.F. Daubert, Ph.D., University of Pittsburgh; H.B. Bull, Ph.D., Northwestern University; Jordi Folch-Pi, M.D., McLean Hospital, Waverly, Mass.; and G.O. Burr, Ph.D., Experiment Station, H.S.P.A., Honolulu, T.H.

Origin and Synthesis was discussed by Konrad Bloch, Ph.D., University of Pennsylvania and Samuel Gurin, Ph.D., University of Pennsylvania.

(Cont'd on page 6)



Newsletter of the American Association  
of Clinical Chemists, Inc.

P.O. Box 123  
Lenox Hill Station New York 21, N.Y.

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of the American Association of Clinical  
Chemists.*

VOL. 2 No. 5 SEPTEMBER 1950

**ANOTHER CHEMIST'S VIEWS**

I was unable to discover that any beneficial purpose was served by publication in the July issue of the *Clinical Chemist* of the summary of the Survey of the Accuracy of Chemical Analyses in Clinical Laboratories by Drs. Belk and Sunderman. In my opinion, the comments that followed were extremely priggish and showed their author to lack comprehension of the objectives and circumstances under which the survey was conducted.

The report itself concerns conditions in 1946 as published in 1947 in a journal of wide circulation. It has been widely discussed, and received a thorough airing at the Symposium on Clinical Chemistry held jointly by the American Chemical Society and American Association of Clinical Chemists in Atlantic City September 1949. It was again summarized in the *Deutsch* article in the *Womans Home Companion* this year. Any clinical chemist not thoroughly acquainted with its content in July 1950 must indeed have led a sheltered life.

The author of the outdated comment in the *Clinical Chemist* implies that the sole cause of the poor results shown by the survey is lack of chemical competence on the part of the clinical pathologist and scoffs at the reasons given to explain them. Clearly a lack of understanding of clinical chemistry and inadequate supervision is an important deficiency in many clinical laboratories and this is acknowledged by many clinical pathologists. However, it is unfortunately true that the causes given to the surveyors imposed a serious handicap on the performance of laboratory examinations in 1946 and still do in 1950. Many hospital laboratories are confronted with work loads that far exceed the capacity of a capable staff. Crowded, under-equipped laboratories are the rule rather than the exception. Salaries do not adequately compensate for the training required and the responsibilities assumed by the laboratory staff. There are a number of reasons for the handicapped condition of many hospital laboratories, but most are beyond the direct control of the clinical pathologist. Allotment of funds and provision of space are the province of hospital

(Con't next page)

**NEW MEMBERS AS OF  
AUGUST 31, 1950**

*Because some of the Membership Committee have been on a vacation this list is incomplete. Names not appearing on this list will be printed in the November issue.*

Beach, Eliot F.; New York, N.Y.  
Dorfman, Herbert; Brooklyn, N.Y.  
Mello, Marie Isabel; Rio de Janeiro  
D.F., Brazil  
Olsen, Norman S.; Nashville, Tenn.  
Taussky, Hertha H. New York, N.Y.

**BOX 123**

The editorial of the August 7th issue of the *Chemical and Engineering News* discussed plans for the International Chemical Conclave, as part of the 75th Anniversary of the American Chemical Society to be held in New York City in September 1951.

In part, Walter J. Murphy wrote: "A special opportunity is present in The International Chemical Conclave to publicize the work of the chemist and chemical engineer, and to build additional prestige and recognition of the chemical profession."

I do not think it too early for our Executive Committee to make arrangements so that the AACC can also take part in the proceedings or even have an exhibit presenting clinical chemistry to the public as a separate entity.

I would suggest, for example, an exhibit showing clinical chemistry at work: how a disease course may be followed, how a toxicological examination for drug overdoses and poisoning, aids in rapid and specific treatment of such emergency cases, or how through post-operative determinations of electrolytes, acid-base balance may be maintained. All this would have extreme interest for the public, who usually pay large laboratory fees, but seldom attribute specific results to the chemical laboratory.

The AACC will be three years old in 1951, and I believe, "old enough to have its picture taken with the rest of the family."

Harry Wolfson

**"MANY SMALL MAKE A GREAT"**

What can we as individual members do to aid the work of the AACC? We all know the aims and objectives of the organization. But the big question is how are they to be accomplished.

Although the AACC is not yet three years old the membership has already passed the three hundred mark. But this is not enough. To be effective the Association should represent the majority of working clinical chemists and those chemists interested in clinical chemistry.

That is where we individual members can do our part; by appointing ourselves as committees of one to get members for the Association. We can ask ourselves, are all those in my community or area who are eligible for membership in the AACC already members? If they are not, why not? Have they heard of the Association? If they haven't can't I tell them about it?

We should all make every effort during the coming months to make sure that everyone in our locality who is qualified for membership is informed about the Association and urged to join.

Being chemists, not salesmen, this will not be an easy task for us. But the Association can best serve our professional interests by being strong enough to make its voice heard. And to be strong it needs members.

# THE AMERICAN ASSOCIATION OF CLINICAL CHEMISTS

*Founded 1948*

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*Proposed Membership Certificate described on page 1.*

## ANOTHER CHEMIST'S VIEWS

(Cont'd from page 2)

management. Hospital incomes are notoriously inadequate and have never been more so than during the current period of rapidly expanding services. It is a common practice among hospital administrators to divert funds from the laboratory to other essential hospital activities. Although such diversions of funds may be necessary, the consequence may be substandard laboratory performance. The ultimate responsibility lies with the peculiar values of our contemporary society which appears unwilling to allot as large a share of its wealth to health and education as to luxuries and amusements.

The findings of the report have been used successfully by clinical pathologists and others to bring about correction of some of the handicaps mentioned. It accelerated to a marked extent the trend toward the employ-

ment of chemists in hospital and private laboratories. Many clinical pathologists now strongly favor inclusion of at least one chemist on the staff of any clinical laboratory that undertakes chemical work, if those of Pennsylvania may be considered representative. At the present time, when there is no chemist on the staff it is usually because the hospital is too small, is short of funds, or because a qualified chemist could not be found, and not because the clinical pathologist refused to employ one.

The writer in the *Clinical Chemist* shows a myopic form of professional conceit when he infers that a Doctorate in Medicine precludes competence in clinical chemistry. He would on inspecting the membership lists of the Association of Clinical Chemists find many such degrees listed, and would furthermore find there the name of one of the authors of the report he derides.

Publication of the results of the survey required courage, and it is to the credit of the clinical pathologists that they did not succumb to the temptation to cover up, which might easily have been done. To belittle the report and its findings is unfair and discourteous. The lamentable comments in the *Clinical Chemist* will arouse emotions and cause recriminations that will harm and not help the objectives of the American Association of Clinical Chemists namely, the maximal contribution of chemical technology and chemical thought to the prevention, diagnosis, and treatment of disease.

John G. Reinhold

Hospital of the University of Pennsylvania,  
Philadelphia, Pa.

*Although the report of Belk and Sunderman first appeared a few years ago it is our opinion that the findings are still pertinent today. In reviewing this article we had no intention of stirring up a controversy. We are happy to present Dr. Reinhold's views. — Editorial Board*



## University College, West Indies Gets New Laboratory

*John G. Reinhold, Ph.D., Associate in Charge of Chemistry at the William Pepper Laboratory of Clinical Medicine, University of Pennsylvania Hospital, Philadelphia, spent several weeks in Jamaica, B.W.I. this summer organizing a new hepatic test and nutrition laboratory for the University College of the West Indies at Kingston, Jamaica. At our request he has written the following article so we might all learn of some of his experiences there.*

The area comprising the islands of the Caribbean together with Central America ranks lowest among the major geographical regions of the Western Hemisphere in fat, protein, and caloric intake provided to the population. Compilations of the United Nations Food and Agricultural Organization indicate that only the peoples of the Indian Peninsula and of the islands of southeast Asia have poorer food intakes. High population densities, up to 1160 per square mile in Barbados and 300 per square mile in Jamaica, primitive and soil-destroying methods of agriculture, limited industrial development and consequently curtailed opportunities for employment lead to low incomes and severe poverty. Although the people on the streets and roadsides appear well nourished, much illness occurs that is attributed to poor nutrition. Its prevalence has been decreased somewhat by distribution of food yeast on a large scale at low cost under government sponsorship. However, this has failed to overcome certain fairly common types of deficiency.

Among the more interesting syndromes is the liver injury characterized by deposition of fat and proliferation of connective tissue occurring particularly in children two to eight years old. More than 50 patients suffering from this affliction are seen at the Kingston Public Hospital each year. The cause is not established. The response to high protein intake combined with the usual B vitamin therapy is slow. Food yeast supplementation during the past five years has apparently failed to prevent or correct it. Because of the social and scientific

importance of this and related conditions, Professor Kenneth Hill of the Department of Pathology of the University College of the West Indies, invited Professors Paul Gyorgy and Joseph Stokes, Jr. of the University of Pennsylvania and the Childrens Hospital of Philadelphia to visit Jamaica last spring for the purpose of formulating an attack on the problem. Arrangements were made at that time for a joint investigation by the staffs of the three institutions of this and related disturbances of nutrition.

The University College of the West Indies offered laboratory facilities and staff for the study. Established after the recent war to provide an institution of University rank for the inhabitants of the British Crown Colonies in the West Indies, it is housed in the wooden barracks of a prisoner-of-war and internment camp while permanent buildings are being constructed. The first buildings, those of the university hospital and school of medicine, are now about half completed. Funds for the buildings and equipment are provided by the Crown. Costs of operation will be born by the participating colonies. The faculty is still in the process of being assembled. It is evident from the high caliber of the faculty appointments and the scope of the plans that this institution will be able to make substantial contributions to the solution of problems of great importance not only to the Caribbean area but to all peoples.

The organization of the medical school is modelled in many ways on that of the University of London. Biochemistry is incorporated into the Department of Physiology while Bacteriology is combined with Pathology. The Department of Pathology also will organize and direct the chemical, bacteriological, hematological, and other service laboratories of the new hospital.

At the time I arrived, little had been done toward organization of the hospital chemical division. The assessment of the severity of liver injury and evaluation of response to treatment required that chemical procedures be available. Several rooms in the pathology barrack were made available to the project for a chemical laboratory. One technician and two apprentice technicians were assigned to it, and the writer with Dr. John Goodey, who will supervise the work of the laboratory, undertook to set up a battery of

procedures for hepatic testing. These included serum bilirubin, albumin globulin, cholesterol, total lipid, alkaline phosphatase, choline esterase, thymol test, and cephalin cholesterol flocculation, plasma prothrombin, hemoglobin, bromsulfalim retention and urine bilirubin and urobilinogen.

Scarcity of laboratory glassware and equipment and of chemicals of analytical grade caused us considerable difficulty. Attempts to fractionate proteins, to quantitate bile pigments or cholesterol, and to measure enzyme activities failed until reagent quality chemicals were kindly loaned by the Government Laboratory in Kingston. Procurement of supplies is a slow undertaking in Jamaica, the usual delay being 6 to 8 months. This is in part because of its remoteness, but more important are the short stocks of many items depleted during the war that the United Kingdom has not yet succeeded in replenishing. The dollar shortage and resulting currency controls prevent purchases from sources other than the United Kingdom. Fortunately, our project had access to dollars and the most critical deficiencies were remedied by supplies shipped from the United States by Air Freight. Some surplus laboratory supplies remaining from stocks of Vernon Field, an American Air Base acquired by the destroyers-bases exchange, were on hand. Despite the half mile trip to the nearest centrifuge and a 1000 foot walk to the analytical balance, the laboratory started pilot tests within two weeks and was functioning with a reasonable degree of effectiveness within three.

The diets of Jamaican peasants provide unbelievably small amounts of protein of animal origin. The average consumption of eggs is four per capita per year. Meat is seldom served more than once a week. Codfish, the most widely consumed food of animal origin, is served in amounts so small that it is more nearly the class of condiment than meat, and recent rises in its price deny it to some families. One small can of condensed milk serves a family, including small children, for three to five days. These facts strongly suggest that deficiencies in the vitamin B<sub>12</sub>-animal protein factor complex may cause or contribute to some of the abnormalities seen among the Jamaicans. This hypothesis is among the first being investigated in experiments is now under way.

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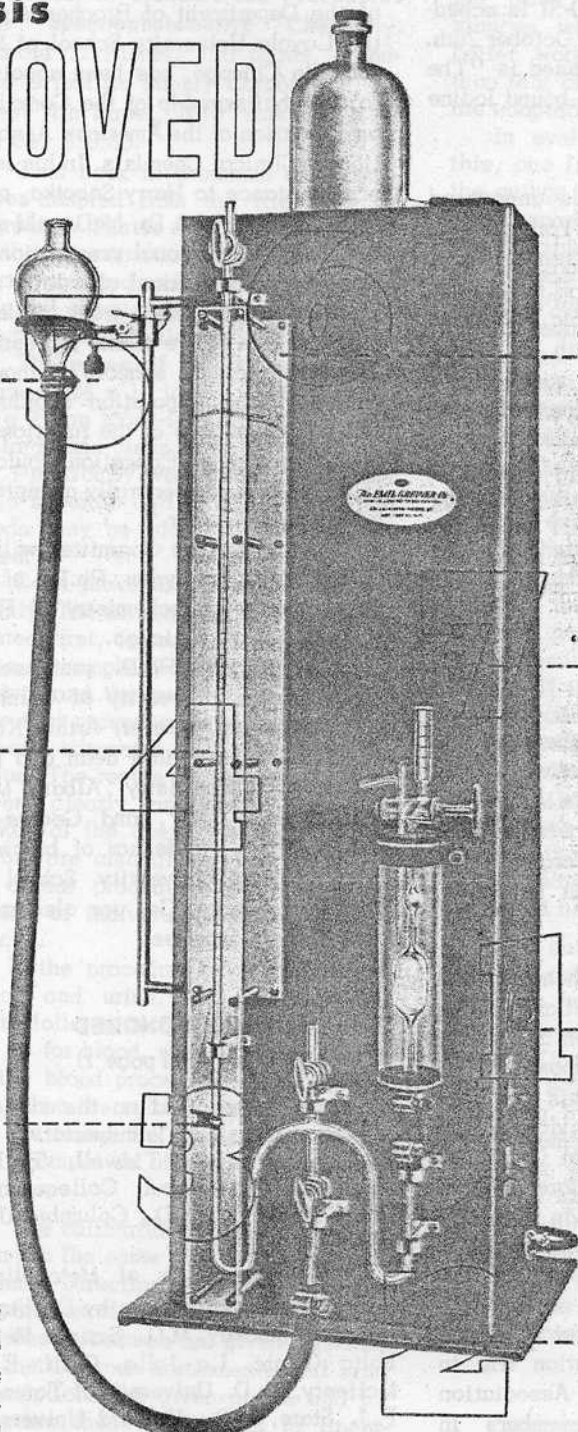
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\*Van Slyke, et al. J. Biol. Chem. 136, 509 (1940); 102, 635 (1933); 95, 599, 587, 569, 547, 531, 509 (1932); 79, 739 (1928); 78, 801 (1928); 74, 639 (1927); 73, 605, 127, 121 (1927); 72, 545, 39 (1927); 71, 235 (1927); 61, 575, 523 (1924); 49, 1 (1921); 30, 347 (1917).



## LOCAL SECTION NEWS

### Philadelphia Section

The first meeting of the Philadelphia section for the year 1950-51 is scheduled to be held Thursday, October 26th. The subject to be discussed is "The Determination of Protein-bound Iodine in Serum."

### New York Section

A business meeting is announced for the Metropolitan New York section, to be held Wednesday evening September 27th, 1950 at 8:30 P.M. in room M003 of the Woman's Clinic, New York Hospital, 530 East 70th St., New York, N.Y. The agenda will include a discussion of by-laws for the Section and the type of scientific meeting desired by the membership. It is hoped that the business meeting will be brief so that members will have time for individual exchange of ideas. All members are urged to make every effort to attend.

## QUIDNUNC

One of the first members of the AACC to be affected professionally by the Korean conflict was Major Jose A. Rivera who was transferred this summer from the Valley Forge General Hospital in Pennsylvania to Japan.

\* \* \*

Julius J. Carr, senior chemist at the Metropolitan Hospital, Welfare Island, New York, N.Y. has taken a leave of absence beginning this month to intensify his work towards his doctorate at New York University. Isidore Gubernick, assistant chemist at Goldwater Memorial Hospital, Welfare Island, will run the Metropolitan Hospital chemistry department in his absence.

\* \* \*

Max M. Friedman, secretary of the AACC combined a vacation trip to California in July with Association business by visiting members in various parts of the country. At the Mayo Clinic in Rochester, Minn, he called upon Harold Mason, and in Santa Barbara, Calif, he saw Fritz E. Bischoff at the Santa Barbara Cottage Hospital. While in Los Angeles he met informally with Albert L. Chaney, L.F. Pierce and Arnold Ware of the Southern California Section.

## CHAIRMAN APPOINTED FOR COMMITTEE ON EDUCATION

Hugh J. McDonald, D.Sc., chairman of the Department of Biochemistry of the Loyola University School of Medicine in Chicago, has been appointed to the chairmanship of the Committee on Education of the American Association of Clinical Chemists. In his letter of acceptance to Harry Sobotka, president of the AACC, Dr. McDonald said, "A sound educational preparation, in the future, for clinical chemistry is a factor that can exert a great influence on the whole future of the profession. There are several schools of thought on what this preparation should be and I feel that one of the functions of the Committee on Education would be to arrive at some generally acceptable policy on the matter."

Secretary for the Committee will be Douglas A. MacFayden, Ph.D., of the Department of Biochemistry of Rush Medical School, Chicago.

Robert M. Hill, Ph.D., professor of biochemistry, University of Colorado Medical School, Denver; Arthur Knudson, Ph.D., associate dean and professor of biochemistry, Albany Medical College, N.Y. and George T. Lewis, Ph.D., professor of biochemistry, Emory University School of Medicine, Emory, Ga. are also members of the Committee.

## BLOOR HONORED

(Con't from page 1)

Papers were read on the subject of Absorption and Transportation by Dr. Sperry, H.C. Tidwell, Ph.D., Southwestern Medical College and Erwin Chargaff, Ph.D., Columbia University.

Under the topic of Metabolism-Normal there were papers by Dr. Stotz, Eaton M. Mackay, M.D., Scripps Metabolic Clinic, La Jolla, Calif; E.W. McHenry, Ph.D., University of Toronto; F.J. Stare, M.D., Harvard University and Camillo Artom, M.D., Bowman-Gray School of Medicine.

Papers were read on Metabolism-Abnormal by Dr. Haven; R.T. Holman, Ph.D., College Station, Tex.; Perry J. Culver, Massachusetts General Hospital, Boston, Mass.; S.J. Thannhauser, M.D., Tufts Medical Center and Arild E. Hansen, M.D., University of Texas Medical School.

## MEDICAL PERSONNEL

(Con't from page 1)

imum of two years professional experience in any of the medical allied sciences listed above, or in other related sciences for which there is a demonstrated need in the Medical Department.

(3) Possess a bachelor's degree from a school or college acceptable to the Surgeon General, and have a minimum of three years of professional experience in any of the medical allied sciences listed above, or in other related sciences for which there is a demonstrated need in the Medical Department.

Applicants for the grade of captain, in addition to the above requirements, must have a minimum of four years of professional experience, and for the grade of major nine years of professional experience is required.

Medical personnel holding Reserve commissions are urged by the Army to volunteer for active duty by immediately contacting The Surgeon General, Department of the Army, Washington 25, D.C., stating their qualifications, eligibility, and the fact that they are volunteering their services.

Qualified civilians interested in obtaining Reserve commissions in the Army Medical Service may apply to State Military District Headquarters. In New York City applications may be made at Organized Reserve Headquarters, Ninth Floor, 30 W. 44th St.

At the conclusion of the proceedings Dr. Bloor presented a summary.

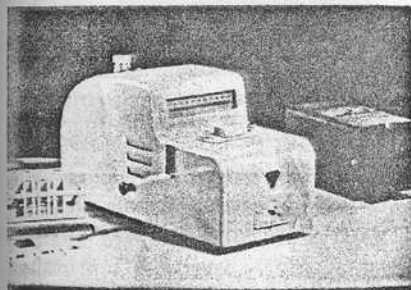
The Robert Gould Research Foundation, a non-profit organization located in Cincinnati, Ohio, is devoted to public health and welfare. It provides funds in support of research in human and animal nutrition.

## THIRD ANNUAL MEETING TO BE HELD IN BOSTON

The third annual meeting of the American Association of Clinical Chemists will be held in Boston during the first week in April, 1951, in association with the 119th annual meetings of the American Chemical Society.

Further announcements of the program and other arrangements will be published in future issues of THE CLINICAL CHEMIST.

The new Bausch & Lomb "Monochromatic" Colorimeter is designed for clinical and general analytical work. It is a single cell, direct reading, photo-electric colorimeter in which light, controlled by a constant voltage transformer, passes through a heat filter, narrow band interference filter, the sample and then through a barrier-layer cell.



Current output of the barrier-layer cell is measured by a sensitive double suspension galvanometer. An index line, engraved on a collimating lens ahead of the galvanometer, is reflected by the galvanometer mirror on the translucent scale.

The interference filters have a narrow band pass of 20 millimicrons and a transmission of 40%. This high transmission of a narrow portion of the spectrum gives great sensitivity and close approximation of Beer-Lambert's Law.

Each instrument is supplied with a complete operation manual with sample calibration curves for 14 clinical determinations; three test tubes; voltage regulator, four interference filters (430mu, 500mu, 550mu, 630mu); and one spare 6-v., 32 c.p., lamp.

Calibrations for the 14 tests are available.

### CORRECTION

Because of inadequate information the July issue of THE CLINICAL CHEMIST failed to list all the members of the Nominating Committee. Louis B. Dotti's name was inadvertently omitted.

In the same issue it was erroneously stated that there was a Committee of Methods. Such a committee had been discussed but it was decided instead to have an Editorial Board for the publication of standardized chemical methods used in clinical laboratories.

### Manual of Standardized Procedures for Spectrophotometric Chemistry.

Harold J. Fisher. 726 pages, Standard Scientific Supply Corporation, 34 West 4th Street, New York 12, N.Y. Price, \$30.00.

This book is a manual of procedures adapted from the literature by Harold J. Fisher for the carrying out of the determination of substances occurring in blood and urine of interest to clinical chemists, biochemists, physiologists and physicians.

The pages of the book are loose leaves, 8½ x 11 inches, held together by a 7 ring loose-leaf binder. The type is large and clear.

Practically every method is treated as a separate entity, so that new methods may be added or old ones deleted.

Each procedure is described uniformly. The principle of the method is stated first, followed in order by the type of sample required, the test procedure and the calibration procedure. The test procedure is subdivided into special apparatus, reagents and technique. The recipe for the reagents are given clearly and concisely. The makes of the chemicals used by the author are also given. The technique or actual procedure is given as a series of individually numbered sentences.

If the procedure is applicable to blood and urine, the procedure for urine follows, in much the same fashion as for blood, with references back to the blood procedure when applicable. When the calibration graphs given are for blood the precise formula for the calculation of the value in urine is given.

The calibration procedure is given in much the same way as the test procedure. Directions are given for the preparation of the standards.

The procedures are given primarily for the Coleman instruments, but brief descriptions are given at the end for adapting these procedures to linear-scale and logarithmic scale photometers.

A pertinent biography is given at the end of each procedure.

Then follows a sheet devoted to the calibration curve.

The procedures described are adaptations of procedures found in the original literature. Those methods which the reviewer could evaluate

read satisfactorily. In most cases they seemed to be adapted from the best or better procedures in the literature. On the other hand, there are a few instances where the reviewer felt that better work exists in the literature than that cited as the bibliography for the adaptation.

In evaluating a manual such as this, one likes to know the audience the author had in mind when the book was prepared. The author tells us in the introduction. He says, "Because of a constantly increasing number of requests for a wide variety of technical procedures and calibration curves, the author has endeavored to colate under one cover a selection of methods adequate for the needs of the clinical laboratory and to present them in such a manner that they may be readily followed by those with a minimum of experience in the use of the spectrophotometer." This objective has probably been achieved, in part. In many instances, however, several different procedures are presented for the determination of the same substance. If the potential reader should have, in addition to a minimum amount of experience with the spectrophotometer, a minimum amount of experience with and knowledge about determinations such as these the reviewer is not sure that the reader would be able to determine which particular procedure would be the one of choice.

The author cautions the reader that the calibration curves presented "... are intended as a guide to the analyst when preparing his individual curve" (italics by the author). But later he says, "However, the curves appearing in the manual may be used with Coleman spectrophotometers and the error will fall within the limits permitted for routine clinical work, if the conditions enumerated below are carefully observed:" (bold face by the author) Five conditions follow. The author does not say, however, where the result will be.

Roy W. Bonsnes

The problem of bringing together unfilled laboratory positions and chemists looking for those positions is important to the AACC, Max M. Friedman, secretary announced. As soon as machinery for a job information program is set up the association hopes to undertake that service for its members.



*Just Published*

The MANUAL of  
**Standardized Procedures**  
for  
**Spectrophotometric Chemistry**

By Harold J. Fister



A LIBRARY IN ITSELF, a book that saves hundreds of hours, hundreds of dollars and much trouble in preparing most procedures for spectrophotometric chemistry.

Contains 224 procedures for the determination of 115 substances in various biological fluids; includes 115 calibration curves and 6 charts. 339 tests can be performed from this manual.

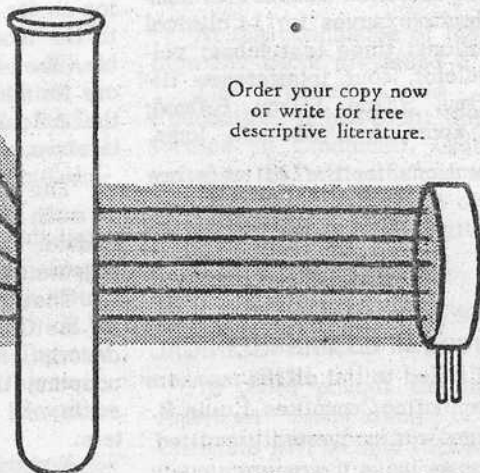
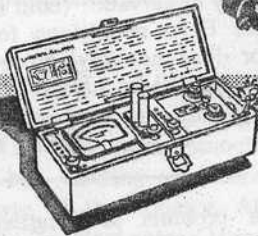
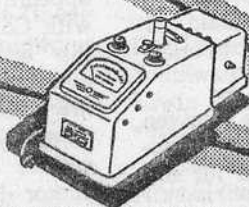
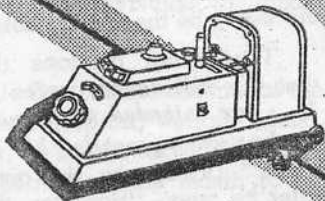
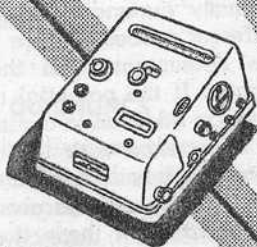
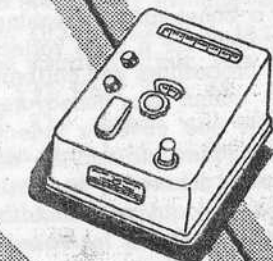
Outlines, in detail, a step-by-step procedure for performing each determination. All methods were painstakingly worked out on the Coleman Spectrophotometer, but are adaptable to nearly every instrument marketed today, including Beckman, Klett-Summerson, Leitz, Hellige, Cenco, Lumetron and Evelyn.

Includes only the latest and most approved clinical methods . . . accurate, easily applicable, simple. All methods were proved under actual working conditions by independent authorities.

Contains 728 loose-leaf pages, printed in large, clear type, on paper especially selected to stand constant laboratory handling, bound in a 7-ring binder stamped in gold.

If you use only a few of these many procedures, you will save far more than the cost of this manual, priced at thirty dollars a copy.

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# The CLINICAL Chemist

NEWSLETTER OF THE AMERICAN ASSOCIATION OF CLINICAL CHEMISTS, INC.

VOLUME 2 NUMBER 6

NOVEMBER 1950

## Sobel Presents Scientist Exhibit

An exhibit entitled "The Scientist, the Unknown Man at the Bedside" was prepared by Albert E. Sobel, Ph.D. Head of the Department of Biochemistry at the Jewish Hospital of Brooklyn and presented there on United Hospital Fund Day held on Sunday October 8th.

Aimed at acquainting the lay public with the work of the clinical laboratory the exhibit explained by means of posters how the scientist collaborates with the doctor in the treatment of the patient. The central poster of the display headed "The Team at the Bedside," to which Dr. Sobel is pointing in the photograph on page 5, illustrates the scientist as a shadow at the bedside of the patient attended by a physician and a nurse.

The way in which this team works is amplified in the poster on the right under the heading "Function of the Team". This chart illustrates the fact that the scientist functions in the laboratory by doing analysis and research and is concerned with the patient only indirectly through reciprocal consultation with the physician who makes the diagnosis and treats the patient, either directly or through the nurse who is also responsible for the care of the patient.

As an example of an actual clinical problem requiring the reciprocal consultation between the physician and the scientist for a definite diagnosis Dr. Sobel chose the case of "A Child in Convulsions." This panel, hidden behind Dr. Sobel in the picture, describes the situation in elementary terms and reads: "Our story concerns one of the unknown scientists at the bedside, the clinical chemist.

(Continued on page 5)



Saifer a host at laboratory opening.

## CHRONIC DISEASE HOSPITAL BROOKLYN OPENS NEW LAB

The clinical laboratories of the new \$2,500,000 six-story addition to the Jewish Sanatorium and Hospital for Chronic Diseases in Brooklyn were opened to public inspection on Friday afternoon, September 29th. Hosts for the occasion were Bruno W. Volk, M.D., Director of Laboratories, who designed the laboratories, and Abraham Saifer, Biochemist, member of the American Association of Clinical Chemists.

The laboratories are located on the sixth floor of the new building and are divided into sections for biochemistry, bacteriology, serology, histology, hematology, photography, media preparation and glassware, offices and a conference room. Additional space is located in the basement, which includes an animal experimental division with facilities for handling all kinds of animals and a special equipment room.

(Continued on page 5)

## Nominating Committee Suggests Candidates

At a meeting of the Nominating Committee, held in New York City on September 28th, the following slate of officers for the Executive Committee of the American Association of Clinical Chemists for the period of July 1, 1951 to June 30, 1952 was suggested.

### President:

John G. Reinhold, Philadelphia, Pa.

### Vice-President:

Albert E. Sobel, Brooklyn, N.Y.

### Secretary:

Max M. Friedman, Jamaica, N.Y.

### Treasurer:

Louis B. Dotti, New York, N.Y.

### Members:

Fritz Bischoff, Santa Barbara, Calif.

George T. Lewis, Emory University, Ga.

Marschelle H. Power, Rochester, Minn.

Harry Sobotka, New York, N.Y.

Ellenmae Viergiver, Philadelphia, Pa.

All members in good standing as of October 15, 1950, are eligible to vote. The name of any member of the Association may be substituted for any or all of the names on the enclosed ballot if the voters desire to do so by using the blank lines available under each proposed name. In addition seven new members of the Nominating Committee are to be elected from among the membership to serve from January 1, 1951 to December 31, 1951.

Members of the present Nominating Committee are Louis B. Dotti, Max M. Friedman, Miriam Reiner, John G. Reinhold, Albert E. Sobel and Harry Sobotka.

All ballots must be returned by December 15, 1950.

*Biographical sketches of proposed new members of Executive Committee will be found on page 4.*



Newsletter of the American Association  
of Clinical Chemists, Inc.

P.O. Box 123  
Lenox Hill Station New York 21, N.Y.

**EDITORIAL BOARD**

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Arnold Ware, *Southern California Section*

*Views expressed in the editorials and  
opinions advanced by contributors do not  
necessarily represent the official position  
of the American Association of Clinical  
Chemists.*

VOL. 2 NO. 6 NOVEMBER 1950

*The New York Times published the  
editorial reprinted below on October  
28, 1950. Its perspicacity and perspi-  
cuity on this subject impressed us.  
We are reprinting it, with the permis-  
sion of The New York Times, for  
those of our readers who might have  
missed it in the original publication.*

**THE NOBEL AWARDS**

No technically informed person will question the standing of Dr. Edward C. Kendall of the University of Minnesota and of Dr. Tadeus Reichstein of Basle, Switzerland, in organic chemistry. Both are authorities on the hormones secreted by the adrenals, two glands that lie just over the kidneys. Nor will physicians question the standing of Dr. Philip S. Hench of the Mayo Clinic in the field of joint diseases. The award of the Nobel Prize for medicine to these three research scientists, now world-famous by reason of their work in arthritis, will be generally applauded.

That identical discoveries and inventions are bound to be made simultaneously in a technically minded society is inevitable. Newton and Leibnitz developed calculus simultaneously and independently; Darwin and Wallace hit on natural selection as a factor in evolution at the same time; Bell and Gray filed patent ap-

plications for identical telephones on the same day. The work of Kendall and Reichstein testified again to the inevitability of discovery; for both men discovered compound E, now known as cortisone, independently, though it remained for Dr. Hench to make the most of its anti-arthritis properties.

The Nobel award for medicine also emphasizes the growing dependence of medicine on the biochemist. Indeed, the development of vitamins and hormones must be credited almost entirely to chemists. Though the physician is by no means relegated to a place of minor importance in the development of medicine, it is more and more evident that his business is to apply the discoveries which have been made in the laboratory and then clinically approved. Physicians struggled with arthritis for centuries in vain. It was not until Kendall and Reichstein came along and revealed the wealth of hormones secreted by the adrenal cortex or "bark," and not until Kendall and Hench worked together in exploiting what had been accomplished in the chemical laboratory, that the treatment of arthritis really became scientific.

**ELECTION TIME**

At this time of the year the AACC asks you as members to show your interest in your organization by voting for new officers. The Nominating Committee has proposed a slate of candidates who they sincerely believe will work for the good of the Association. But you are not limited by their choice. You are free to substitute the name of any member whom you think will be more capable of filling any or all of the posts. Whatever your choice it is important for you to show your support by voting promptly.

**VALUE FOR YOUR DOLLARS**

As noted in another section of the CLINICAL CHEMIST, the annual dues for the Association in 1951 will remain the same. The Executive Committee has decided that no increase would be necessary, even in view of rising costs.

We of the Editorial Board are of course prejudiced, but somehow we feel that few other societies give their members so much for so little. For a few dollars a year we purchase faith in the future of clinical chemistry.

**BOX 123**

*Letters From Members*

**ON CERTIFICATION**

Dear Sirs;

Over eight years have passed since the Committee on Chemical Service to Medicine set up by the American Chemical Society (du Vigneaud, J.A.M.A., May 9, 1942, 119, 207) discussed the certification of clinical chemists. It is my feeling that the delay in accomplishing certification is not contributing to the elevation of the status of the clinical chemist nor is it clarifying his relation to the medical profession.

Eligibility to full membership in the American Association of Clinical Chemists has much in common with the recommendation the original Committee on Chemical Service to Medicine was prepared to make as to the qualifications for a clinical chemist. Accordingly, I would like to propose that the American Association of Clinical Chemists set up without delay the machinery necessary to certify its full members. To begin with, since those who are now carrying the burden of clinical chemistry come from all walks of chemistry, it would be unwise to be fussy about requiring specific courses in training. That may come later. For the present, a Ph.D. in chemistry or its equivalent should be adequate as a minimum educational requirement. However, I feel very strongly that there can be no substitute for the required period of practice in a clinical chemistry laboratory, and that neither teaching experience nor research in clinical chemistry, valuable adjuncts as they are, should be permitted to serve as substitutes for actual experience.

The clinical chemists have suffered eight years of delay. It is up to them to take the initiative. They have, by setting up requirements of eligibility for membership in their own organization, a sound working basis for certification.

Santa Barbara, Calif.

Fritz Bischoff

**A VIEW ON OUR AIMS**

Dear Sirs;

Belatedly I am taking advantage of your request for "Letters Please" in the July number of The Clinical Chemist. I have been quite pleased with the editorial policy of the newly appointed editorial board of our newsletter. It has been very interesting to read of the formation and activities of the Methods Committee. This is an important committee and its appointment represents the start of fulfillment of one of the important aims of the Association. I have in mind the aims as outlined by Max Friedman in the October 24, 1949 issue of

*(Continued on page 3)*

## ANNUAL DUES REMAIN UNCHANGED

Chemical and Engineering News. I am sure that the Association is giving thought (possible action) to fulfilling the other aims outlined in Dr. Friedman's timely and apt speech given at the first meeting of the American Association of Clinical Chemists.

As I review the aims of the Association listed by him, they obviously fall into two classes, the scientific and the professional. The scientific include the two mentioned above and additionally a study of nomenclature and organization of symposia. It is the opinion of the writer that these aims could as well have been achieved by organization as a division of clinical chemistry within the A.C.S.

The professional aims include those things called "major issues" by Dr. Friedman such as raising "the generally low economic level of the clinical chemist; the secondary role assigned him in many hospitals and laboratories; the lack of facilities at his disposal for research; as well as other serious problems that have confronted him for many years". Among the more serious of these problems is the present legal restriction placed in some states upon the clinical chemist in the pursuit of his profession. These latter professional aims could, of course, not be achieved by organization within the A.C.S. For this reason we have the American Association of Clinical Chemists who are organized essentially upon a professional basis.

H.S. Osgood  
North Girard, Pa.

### CORRECTION

Dear Sirs:

In my letter to the Clinical Chemist concerning the Belk-Sunderman report, published in the September issue, I stated that one of the authors of that report was a member of the Association. I have been informed by the Secretary that I erred in so stating.

Philadelphia, Pa.                      John G. Reinhold

### REPORT ON CLINICAL CHEMISTRY COMMITTEE MADE PUBLIC

A recommendation to give general approval to the American Association of Clinical Chemists' plan to carry out studies on standardization of clinical chemical methods was made public by the Committee on Clinical Chemistry of The American Chemical Society in its annual report published in Chemical and Engineering News on October 30th. A motion was passed offering cooperation to the AACC's plan since the committee was not in a position to carry out such studies itself.

By vote of the Executive Committee the annual dues for members will remain at five dollars for the fiscal year 1951, and two dollars for associate members. Statements are now being prepared by Dr. Louis B. Dotti, treasurer, St. Luke's Hospital, New York 25, N.Y. Those members elected after September 1, 1950 will have their annual dues credited towards the fiscal year 1951.

Since our officers are serving on a voluntary basis, and since the Association has no paid office staff, it would be greatly appreciated if members submitted their checks promptly. Membership cards will be issued upon receipt of dues.

A discussion of the legislative situation affecting clinical chemists was reported and the decision of the committee to attempt to write a "model bill" acceptable to clinical chemists was made known. This would be made available to local groups of clinical chemists who wish to protect their interests by introducing legislation in their state legislature. A preliminary draft of such a bill had been submitted to the committee by one of its members.

The chairman of the Committee on Clinical Chemistry is Warren M. Sperry, Ph.D., Research Chemist for the New York City Psychiatric Institute and Associate Professor of Biochemistry at the College of Physicians and Surgeons, Columbia University. Other members include Hans T. Clarke, Ph.D. Professor and Head of the Department of Biochemistry at the College of Physicians and Surgeons; R.N. Harger, Ph.D. Professor and Chairman of the Department of Biochemistry and Toxicology at the Indiana University School of Medicine; R.M. Hill, Ph.D., Professor of Biochemistry at the University of Colorado; John G. Reinhold, Ph.D., Associate in Charge of Chemistry at the William Pepper Laboratory of Clinical Medicine of the University of Pennsylvania Hospital; Harry Sobotka, Ph.D., Chemist of the Mt. Sinai Hospital, New York, and William A. Wolff, Ph.D., Assistant Professor of Biochemistry at the Bowman-Gray Medical School.

### NEW MEMBERS AS OF NOVEMBER 1, 1950

Abernethy, Raymond J.; Los Angeles, Calif.  
Alper, Carl; Philadelphia, Pa.  
Anecchiarico, Frank J.; Bklyn. N.Y.  
Applegate, A.G.; Cranbury, N.J.  
Asimov, Issac; Boston, Mass.  
Bouziane, N.R.; Montreal, Canada  
Brown, Mayo E.; Rocky Hill, Conn.  
Carpenter, Mary D.; Des Moines, Iowa  
Chernaik, Joseph M.; Flushing, N.Y.  
Cramer, Frank B.; Los Angeles, Calif.  
Detore, Arthur A.; Everett, Mass.  
Enoch, Isle Maria; San Francisco, Calif.  
Freeman, Monroe E.; Washington, D.C.  
Goldenberg, Harry; Flushing, N.Y.  
Golub, Murray; Springfield, Mass. *Holyoke Hosp.*  
Goodman, Carlyle W.; Lynchburg, S.C.  
Greenspan, Joseph; Brooklyn, N.Y.  
Harris, James C.; Summit, N.Y.  
Hatch, John L.; Long Island City, N.Y.  
Katz, Elaine J.; Chicago, Ill.  
Kier, Lawrence C.; Iowa City, Iowa  
Kirby, John K. Sr.; Iowa City, Iowa  
Kisner, Paul; Lincoln, Neb.  
Lox, Walter E.; Phoenix, Ariz.  
Mezey, Cornelius M.; Gulfport, Miss.  
Mitchaud, Laurent; Waterbury, Conn.  
Nadler, Samuel B.; New Orleans, La.  
Purcell, May K.; Coatesville, Pa.  
Reyes, Felix M.; San Juan, Puerto Rico  
Sims, Ethan A.H.; Burlington, Ver.  
Skeggs, Leonard T., Berea, Ohio  
Stoler, William M., Bronx, N.Y.  
Thorpe, Samuel L.; Cleveland, Ohio  
Tribby, Charles L.; Bridgeport, Conn.  
Wenger, Ray G.; Salt Lake City, Utah  
White, Jerome M.; Lynn, Mass.

### MEMBERSHIP CERTIFICATES READY FOR DISTRIBUTION

It was announced by the Executive Committee that certificates of membership in the American Association of Clinical Chemists are now ready for distribution. They may be obtained by sending a check or money order for \$4.00, payable to the American Association of Clinical Chemists, to Dr. Louis B. Dotti, Chemistry Department, St. Luke's Hospital, New York 25, N.Y., along with a letter specifying the way in which the name is to be inscribed on the certificate and whether a degree is to be included with the name. No laboratory or hospital affiliations can be inscribed.

The certificates are 8 by 11 inches, printed in black on parchment paper with a blue seal, and are suitable for framing.



# Biographical Sketches of Proposed New Officers

## PRESIDENT

JOHN GUNTHER REINHOLD, Associate in Charge of Chemistry at the William Pepper Laboratory of Clinical Medicine of the University of Pennsylvania Hospital, also holds the rank of Assistant Professor of Physiological Chemistry at the Graduate School of Medicine of the University of Pennsylvania. Born in Milwaukee, Wis., on October 29, 1900, he graduated from the University of Wisconsin in 1924 and received his M.S. degree at Yale in 1926. In 1933 he was awarded a doctorate in physiological chemistry from the University of Pennsylvania. During the war he served as chemical consultant to the Commission on Liver Diseases of the Army Epidemiological Board.

## VICE-PRESIDENT

ALBERT E. SOBEL, Head of the Department of Biochemistry of the Jewish Hospital of Brooklyn is also Adjunct Professor of Chemistry at the Polytechnic Institute of Brooklyn. He was born in Luko, Hungary on September 24, 1906. He holds the degrees of Bachelor of Science (1930) and Chemical Engineer (1935) from Cooper Union. He was awarded a Masters degree from Columbia University in 1936 and received his doctorate from the Polytechnic Institute of Brooklyn in 1940. He is the author of 76 papers on micro methods, mineral metabolism, sterols, gastric ulcers and aqueous dispersion of fat-soluble vitamins.

## SECRETARY

MAX M. FRIEDMAN, Senior Chemist at Queens General Hospital, New York, Consultant Chemist at Lebanon Hospital. He was born in Austria on January 24, 1907 and completed his undergraduate work at the University of Alabama in 1930. After also studying at Columbia and New York University he was awarded his Doctorate by the Polytechnic Institute of Brooklyn in 1947. His main scientific interest is body water or, more specifically, extra-cellular fluids. His research for the past several years has been divided between body fluids and nucleic acid in normal and pathological tissues.

## TREASURER

LOUIS BASIL DOTTI is Chemist at St. Luke's Hospital in New York City and Lecturer in Physiology and Biochemistry at the New York Medical College. He was born in New York City on August 13, 1903, and graduated from Columbia University in 1929. He also did his post-graduate work at Columbia, receiving his M.A. in 1931 and his Ph.D. in 1936. He has worked extensively on carbohydrate and calcium metabolism, digestive enzymes and liver function tests.

## MEMBERS OF THE EXECUTIVE COMMITTEE

FRITZ BISCHOFF is the Director of Chemical Research Projects at the Santa Barbara Cottage Hospital Research Institute, Santa Barbara, Calif. He was born in Milwaukee, Wis., on May 21, 1899 and did his undergraduate work at the University of Wisconsin graduating with a B.S. in 1920. In 1922 the University awarded him an M.S. degree and in 1924 a Ph.D. He has done research on contact catalysis, volatile oils, sulphur dyes, the chemistry of protein hormones, the chemistry of lead poisoning, chemotherapy in cancer, hyperthermia, insulin, pituitary, carbohydrate metabolism, acid base balance in man and cancer research as related to hormones and sex hormones.

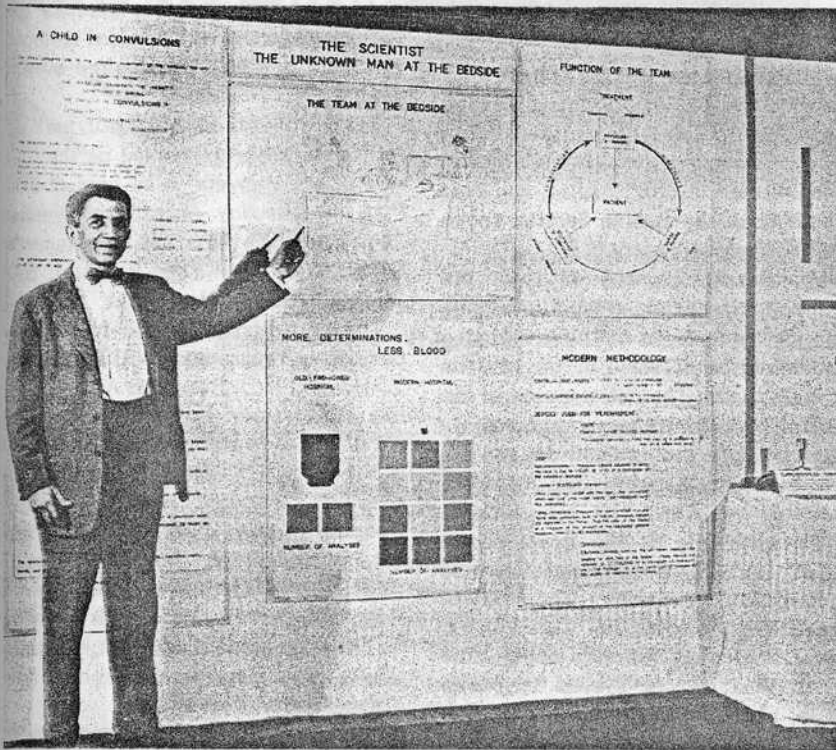
GEORGE T. LEWIS is Chairman of the Department of Biochemistry at the Emory University School of Dentistry and Professor of Biochemistry at Emory University. He was born in Bolton Landing, N.Y., on July 1, 1901 and graduated from Middlebury College with a B.S. degree in 1922. He was awarded a Ph.D. in biological chemistry from the University of Michigan in 1927. He is a consultant in biochemistry for the Communicable Disease Center, U.S. Public Health Service, consultant in biochemistry for Lawson Veterans Administration Hospital and special consultant in clinical chemistry for the Board of Examiners in the Basic Sciences of the State of Florida. He is also a Lieutenant Colonel U.S. Army Service Corps Reserve.

MARSCHELLE H. POWER is Professor of Physiological Chemistry in the Mayo Foundation, Graduate School, University of Minnesota, and Head of the Division of Biochemistry at the Mayo Clinic. He was born in Edgar, Nebraska, September 1, 1894, and graduated from the University of Nebraska in 1917. He received his Ph.D. degree in organic chemistry from the University in 1923. His publications have included papers relating to the nature of the blood sugar as studied by means of in vivo dialysis, carbohydrate metabolism, hyperinsulinism, renal function, acid-base equilibrium in the blood, metabolic abnormalities in Addison's disease and in Cushing's syndrome, the use of radioactive iodine in the study of the thyroid gland and the metabolic effects in man of administration of adrenocorticotrophic hormone and of various steroid hormones of the adrenal cortex.

HARRY SOBOTKA is Head of the Department of Chemistry at Mt. Sinai Hospital, New York City. He was born in Vienna, Austria, on August 4, 1899, and after studying at the University of Vienna received his Ph.D. from the University of Munich. He did post-doctorate research at the University of Munich and microbiological studies in Copenhagen. In addition to numerous research papers, reviews, articles and text-book chapters in the fields of clinical chemistry, enzymes, organic chemistry and colloid phenomena, he is the author of two books on steroids and on bile.

ELLENMAE VIERGIVER is Chemist for the Ayer Clinical Laboratory at the Pennsylvania Hospital, Philadelphia. She was born in Rochester, N.Y., in 1914 and graduated from the University of Rochester in 1936. She was awarded a Doctorate from the University in 1941. Her professional career includes fellowships in Obstetrics and Gynecology at the University of Rochester School of Medicine and Dentistry and at Washington University, St. Louis. She is co-author of several papers on pregnandiol and on the physical and chemical properties of cervical mucus.

\*\*\*\*\*



Dr. A.E. Sobel with his exhibit.

A baby is born  
The physician examines the infant  
Something is wrong  
The child is in CONVULSIONS!!!  
Tetany??

Hypoglycemia??  
Alkalosis??

The physician picks up the phone —  
"Chemistry, please."

"I must have a quantitative blood sugar, calcium, potassium, sodium, bicarbonate, chloride, urea and blood pH, but I can only take a few drops of blood with safety."

"Send it down immediately," the chemist answers, "and I shall take care of it right away."

Results

Sugar—normal      Chloride—normal  
Potassium—normal      Urea—normal  
Sodium—normal      Blood pH—normal  
Bicarbonate—normal      Calcium—LOW

The physician administers calcium salts and the child is on its way to recovery.

NEW IDEAS,  
NEW INSTRUMENTS

Had the request been made five years ago, the answer would have been "Sorry, not enough blood."

Ten years ago, the request would not have been made. The newer knowledge of clinical chemistry's answer for this request was developed by the scientist in the last ten years.

In order to save more lives, the finest brains in science struggled with a two fold problem.

—To develop precision methods for the analysis of different substances in blood.

—To reduce the amount of blood required for a precision analysis to one single drop. Earlier methods required as much as a quart of blood.

The solution of this problem lay in fine measuring devices, sensitive instruments, and that priceless ingredient  
**A NEW IDEA"**

For the benefit of scientists attending the United Hospital Fund Day Dr. Sobel presented an exhibit on Quantitative Ultra-micro Biochemistry which he had previously shown at the International Pediatric Congress at Zurich, Switzerland, July 20-31.

Invited guests included pathologists, laboratory scientists, hospital administrators, college and medical school personnel and staff members from hospitals, research laboratories and medical schools throughout Greater New York. Among the members of the AACC in attendance were Harry Sobotka, Mt. Sinai Hospital, Max M. Friedman, Queens General Hospital, Irving Greenblatt, Beth-El Hospital, Albert E. Sobel, Jewish Hospital of Brooklyn, Bernard Klein, Kingsbridge Road Veterans Administration Hospital and Roy Bonsnes, Cornell University Medical College. The guests, who numbered several hundred, saw a well equipped biochemical laboratory including a spectrophotometer, microbalance, shaking metabolic water bath, a flame photometer, microtitration apparatus, etc. An electrophoresis apparatus is presently on order.

While in Europe Dr. Sobel read a paper on "Studies of the Mechanism of Calcification" at the International Physiological Congress at Copenhagen, Denmark, on August 18th. He also found time to visit laboratories in France and England, and commented on the status of clinical chemistry in the European countries by saying, "In certain respects some of the laboratories are way ahead of anything we have around our hospitals. In most places, however, the facilities are relatively poor. The men are relatively good. I met people from all over the world. On the whole they are all impressed with America and think that nothing is impossible here.

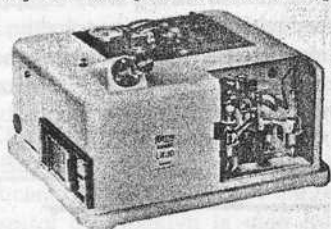
On the whole, most scientist abroad are more cultured in the all around sense than a corresponding group here. In all of these countries they are highly respected which makes the task of being a scientist a very pleasant one."

The subject matter of Dr. Sobel's paper on "The Mechanism of Calcification" formed the material for a scientific exhibit which he and his associate, Albert Hanock, presented at the Graduate Fortnightly of the New York Academy of Medicine held October 9-24.



The Kern Company, is introducing the Kern LK 30 Microelectrophoresis apparatus which extends the technic to exceptionally small samples, and with high accuracy. Only 0.4 ml. solution is required and an accuracy of about 2% is attained with a 1.5% solution.

The Kern LK 30 works on the principle according to which the refraction gradient along the cell is measured by interferometry as described by Labhart and Staub—Hely. Chim. Acta., 30, 1954 (1947). In the LK 30, the light rays pass through the cell twice, thus doubling the sensitivity. The image obtained can be recorded photographically, and the changes of concentration very simply plotted, eliminating the usual long computations. This procedure cuts down the time for fully completing an analysis to within 1½ hrs.



The apparatus is sturdily and compactly constructed. The dimensions are 16" x 19" x 12", weighing 53 lbs. All parts are readily accessible. The lenses and mirrors are welded into position, eliminating re-cementing problems. No adjustments are necessary, thus being easy to operate even by untrained personnel.

Some of the important applications of the Kern LK 30 are quantitative determinations of the protein components in blood serum and plasma (1/10cc. of serum or plasma is sufficient for a determination); analysis of cerebrospinal and other body fluids of low protein content; checking of therapeutic measures (infusions, etc.); reliable determination of the albumin-globulin quotient; analysis of enzymes and their quantitative study by the isolation of active components; quantitative studies of metabolic processes and immunization (in small as well as large animals).

### EXECUTIVE COMMITTEE HOLDS MEETING

The Executive Committee met in New York City on October 10, 1950. The agenda required a period of four hours and among topics covered were the status of legislation in the several States; as well as several miscellaneous topics.

Among the committee reports there was the one from the Nominating Committee, whose slate is presented elsewhere in this issue. Various progress reports were also noted.

### Boston Section

The Boston Section held their first meeting this fall on October 26 at the New England Center Hospital. Joseph Benotti, who is the Director of the Laboratories at this Hospital and also Chairman of the Boston Section spoke on "Flame photometry."

Mr. Benotti pointed out that the flame photometer has gradually become of importance as an instrument for the determination of some of the cations of body fluids. The deficiencies in the earlier instruments have been largely eliminated, so that present day results can be highly accurate and reproducible.

The principle of the flame photometer, he said, is fundamentally like that of the photometer. The light of the flame, colored by the various ions, is passed, through appropriate filters and optical system to photocells, which in turn either generate or allow to flow an amount of current proportional to the intensity of the color of the flame. The solution containing the ions is introduced to the burner through some sort of atomizer which converts the solution to a mist.

Mr. Benotti continued about his own experience with the Barclay Flame Photometer, citing particularly the importance of the atomizer in any instrument and the good and bad points of the one supplied with this particular instrument. He then described an all glass atomizer of his own design which is independent of hydrostatic pressure.

The annual election of officers was held at this meeting. Joseph Benotti was reelected chairman, Helen Connors was elected vice-chairman and Esther Thomas was reelected secretary.

### New York Section

The Metropolitan New York Section plans to hold during the winter season of 1950-51 a series of meetings which will be round table discussions of clinical chemical methods and the application of the results of such methods to clinical problems. To this end, it is planned to have one or more physicians present briefly the need for a particular type or group of determinations and then to have both

physicians and chemists discuss the best procedures and chemical methods available to obtain the desired overall results.

"Body fluids and electrolytes" is the topic to be discussed at the first meeting of the year to be held at 8:30 P.M., Wednesday evening, November 29th, in Room M007 of the Women's Clinic, The New York Hospital, 530 East 70th Street, New York.

The participants in the formal discussion at this meeting will be Eugene Y. Berger, M.D. Research Assistant at the New York University Research Service, Goldwater Memorial Hospital, N.Y.; Leon C. Chesley, Ph.D., Biochemist, Margaret Hague, Maternity Hospital, Jersey City, N.J. who will act as moderator; Max M. Friedman, Ph.D., Senior Chemist, Queens General Hospital, Queens, New York and Roy W. Bonsnes, Ph.D., Chemist, Women's Clinic, The New York Hospital, New York.

### Philadelphia Section

The Philadelphia Section held its fifth scientific meeting on October 26th, at the Hahnemann Medical College. "The determination and significance of protein-bound iodine" was discussed by four speakers. William C. Foster of the Department of Physiology, Hahnemann Medical College indicated that the protein-bound iodine parallels thyroid activity and is thus of importance as an additional aid in the diagnosis of diseases of the thyroid. He said that administered iodine compounds may vitiate the results. He then outlined the three steps common to all such iodine methods, namely, the precipitation of the proteins, the destruction of the organic matter and finally the determination of the iodine.

Cecilia Riegel of the Lanckenau Hospital discussed the Riggs-Man procedure for the determination of protein-bound iodine with emphasis upon the technical difficulties which might be encountered in the determination. The precipitated proteins must be washed four times, the last with doubly-distilled water. The permanganate used in the digestion must be recrystallized. The temperature must be regulated during the digestion and subsequent distillation. Iodine and

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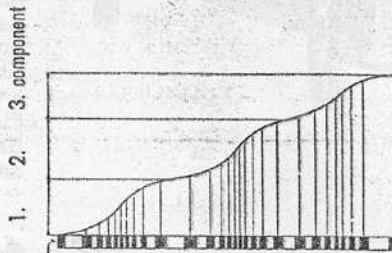


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sulfur dioxide must not be used or be present in the room in which the analyses are carried out. Using these precautions Dr. Riegel obtained recoveries of 83% from iodate solutions and 80% from serum plus iodate. She reported the normal range (uncorrected) of values for protein-bound iodine to be from 2.7 to 6.0 micrograms of iodine per 100 ml.

Herman Brown of The Sarnson Laboratories discussed the importance of controlling carefully the conditions when iodine is determined by its catalytic effect on the reduction of the ceric ion by arsenite. This is one of the most delicate tests known for iodine. The extent of reduction of yellow ceric sulfate may be measured in a photometer. By comparing the extent of the reduction of ceric sulfate solutions containing known concentrations of iodide with those containing unknown amounts of iodine it is possible to determine iodine quantitatively in amounts less than 0.005 micrograms if the conditions under

which the reactions are carried out with respect to time, temperature, method of adding reagents, and other factors are identical.

Henry P. Schwartz, M.D., Principal Biochemist of the Philadelphia General Hospital discussed the value of the protein-bound iodine determinations in thyroid disease.

At a business meeting held immediately after the scientific meeting, Alexander Keller, Chairman of the Nominating Committee presented the names of two of the present officers, John G. Reinhold and Ellenmae Viergiver for reelection as chairman and secretary respectively. W.R. Brown was nominated for vice-chairman.

Miriam Reiner of the Mt. Sinai Hospital, New York City will be the speaker at the next meeting of the Section to be held Thursday, November 30, 1950, at the Hahnemann Medical College. Miss Reiner will talk on "The application of electrophoretic methods to the separation of serum proteins".

### QUIDNUNCUS

Merle Lovell Lewis recently was awarded her Ph.D. in biochemistry from the University of Southern California. The title of her thesis was "Proteins of Leucocytes." She has accepted a position as Research Chemist in Charge of the newly inaugurated Microchemistry Laboratory in the Pediatrics Department of the Los Angeles County Hospital.

\*\*\*\*\*

Cecelia Reigel has recently accepted the position as Chemist for the Lankenau Hospital in Philadelphia, Pa. She had previously been engaged in investigative research at the Hospital of the University of Pennsylvania.

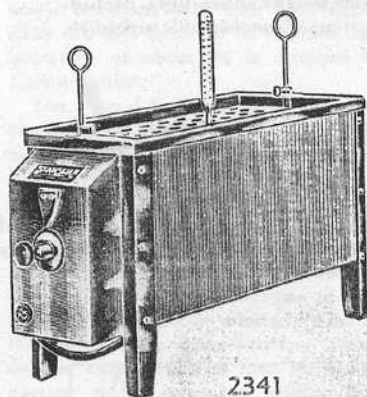
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New York City members who have accepted new positions include Jacob Klinger, formerly of the Harlem Hospital, who has been made Chemist at the Fordham Hospital and Rachel S. Glauberman, also recently at Harlem, who is now Chemist at Morrisania Hospital.



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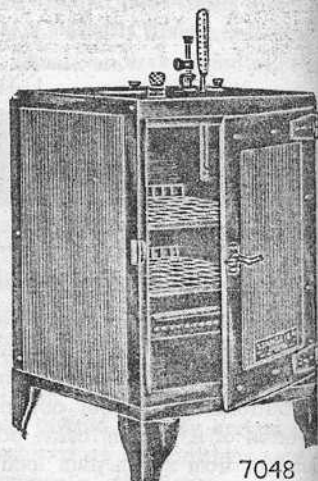
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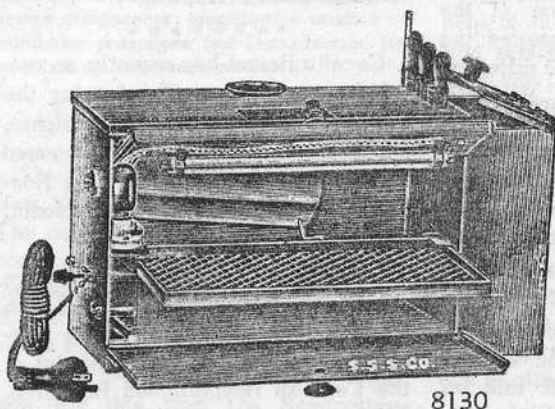
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ELLENMAE VIERGIVER - Received B.A. at University of Rochester, 1936. Ph.D. University of Rochester, 1941. Formerly Fellow in Obstetrics and Gynecology, Washington University School of Medicine; Fellow in Obstetrics and Gynecology, University of Rochester School of Medicine; Research Chemist, Clifton Springs Sanitarium. At present, Chemist, Ayer Clinical Laboratory, Pennsylvania Hospital, Philadelphia.

Abstract of paper: The rapid method proposed by Drekter, Pearson, Bartczak and McGavack (1) has been modified slightly for routine use. The major change is the assay of the entire ether extract rather than an aliquot. The residue from this extract is dissolved in 1.0 ml of 95% alcohol and the usual Zimmerman reaction is applied to 0.2 ml aliquots. After a color development period of 105 minutes, the sample is diluted to 5.0 ml, a volume sufficiently large to be read in the Klett-Summerson photoelectric colorimeter. Duplicate samples of urine analyzed by this method and by the method of Pincus (2) agree within  $\pm 1.4\text{mg}/24\text{ hr}$ .

(1) Drekter, I.J., S. Pearson, E. Bartczak and T.H. McGavack. J. Clin. Endocrin 7: 795, 1947

(2) Pincus, G.J. Clin. Endocrin 5: 291, 1945

### BOSTON

Dr. F.M.L. Taylor, Associate in Research Medicine at Harvard, was scheduled to speak on Wednesday, November 16th, on the "Newer Methods for the Isolation and Determination of Plasma Proteins".

In the absence of the speaker for the evening who was ill, Joseph Benotti gave a talk on the Sperry-Schonheimer method for cholesterol determination. He discussed why this method far exceeds the Bloor method for accuracy. He also tried to bring out the point that the values as performed by the Bloor technique have very little clinical significance because of the unreliability of the method.

In contrast, he showed that the Sperry values are much more accurate and, therefore, have much more clinical significance. He also emphasized the extreme constancy of the ester percentage of cholesterol in normal individuals, in contrast to those with liver disease and mechanically obstructed patients, in which sometimes there is considerable lowering of the ester ratio.

On December 14th, 1949, there was a joint meeting of the Boston Section and the Micro-Chemical Division of the A.C.S. in the Biology Building of Harvard. Dr. E.H. Frieden, of the Harvard Biological Laboratories, gave a most interesting lecture on "Hormone Bio-Assay".

### NEW MEMBERS

At the last meeting of the Membership Committee, the following were accepted for membership:

Dr. Lucy Lewy - New York City, New York

Mrs. Lottie Besman Locke - Bronx, New York

Mr. Sol. Gross - Brooklyn, New York

Miss Nellie Sicher - St. Louis, Mo.

Miss Mary Louise Hoemel - Creve Coeur, Mo.

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