



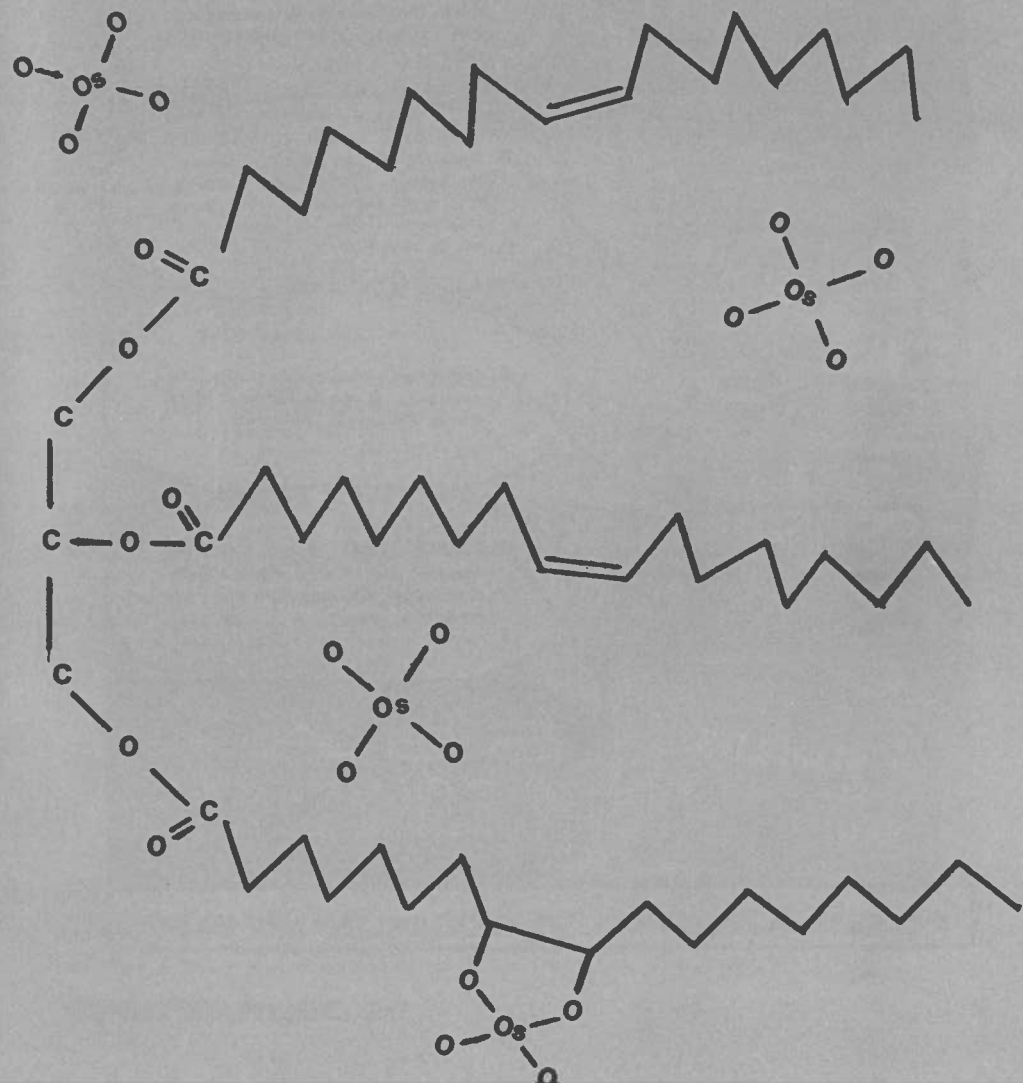
THE CHESAPEAKE CHEMIST

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. XXVIII

SEPTEMBER, 1972

NUMBER 6



HEADQUARTERS

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The Chesapeake Chemist is published monthly September through May by the Maryland Section of the American Chemical Society. Address editorial comments to Dr. William Galetto, McCormick and Co., 204 Wight Ave., Hunt Valley, Md. 21031. Phone 666-3155. Address advertising inquiries and copy to Mr. Kent R. Zeller, McCormick and Company, 204 Wight Ave., Hunt Valley, Md. 21031.

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SEPTEMBER MEETING

1972. MARYLAND CHEMIST AWARD

DATE AND TIME:

Wednesday, September 20,
1972 at 8:30 P.M.

PLACE:

Eudowood Gardens Lecture
Room, Eudowood Plaza,
Joppa Road near Goucher
Boulevard.

SPEAKER:

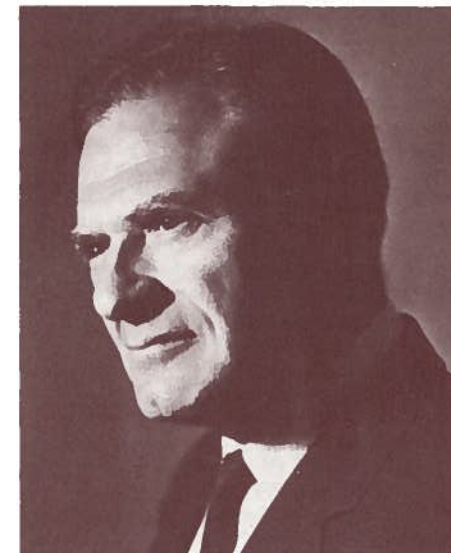
Dr. Arnold M. Seligman,
Chief, Research Oncology
and Cell Biology, Sinai
Hospital, Baltimore

TOPIC:

"Design and Development
of Cytochemical Methods
for the Electron Micro-
scope"

COCKTAILS AND DINNER:

Eudowood Gardens Dining
Room. A Pay Bar will be
available. Price is
\$4.75 for hot Buffet din-
ner (7:15 P.M.). Stu-
dents and their spouses
may attend the dinner for
\$3.00. Reservations are
necessary for the dinner,
and should be made with



Dr. Arnold M. Seligman

Mr. Allen Bednarczyk, Mc-
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Wight Avenue, Hunt Valley,
Md. 21031, phone 666-3155
no later than the Friday
before the meeting. It is
not necessary to be a mem-
ber of the American Chem-
ical Society to attend the
dinner or the talks, and
the talks may be attended
without attending the din-
ner. You are invited to
bring your wife and friends
to both the dinner and the
meeting.

SOCIAL HOUR:

There will be a social
hour after the meeting.
Refreshments will be
served. All are wel-
come.

DR. A. M. SELIGMAN

Arnold M. Seligman was born on March 30, 1912 in St. Johnsbury, Vermont. He received his B.A. degree (*magna cum laude*) from Harvard in 1934 and his M.D. (*magna cum laude*) from Harvard Medical School in 1939. Dr. Seligman began his medical career at Beth Israel Hospital in Boston when he joined their staff in 1939 as Surgical House Officer. In 1941, he became an Assistant Resident in Surgery there. Dr. Seligman's research interests were first developed through his appointment, in 1942, as Resident in Surgical Research at Beth Israel. In 1943, Dr. Seligman joined the staff of the Harvard Medical School as a Research Associate in the Department of Surgery, a position he held until 1948 when appointed Tutor and Assistant Professor of Surgery at the Harvard Medical School (1948-1954). Concurrent with this position, Dr. Seligman also held the position of Assistant Visiting Surgeon, Beth Israel Hospital (1948-1954); Associate Director of Surgical Research, Beth Israel Hospital (1949-1954); and Director, Tumor Clinic, Beth Israel Hospital (1952-1954).

Dr. Seligman left Beth Israel in 1954 and joined the staff at Sinai Hospital in Baltimore as Surgeon-in-Chief, a position he held until this year when he was appointed Chief of the Dept. of Research for Oncology and Cell Biology at Sinai. Dr. Seligman has also been an Associate Professor of Surgery at the Johns Hopkins University School of Medicine (1954-1967) and in 1968 was promoted to full Professor.

Dr. Seligman's professional society contributions began in 1946 with the initiation of his long and distinguished association with the National Cancer Institute. It was during that year that he was first named Responsible Investigator on Research Grants by the N.C.I. During the year 1947-1948, he was a Special Consultant to the National Cancer Institute. Later, 1955 to 1957 and again 1963 to 1967, Dr. Seligman was a member of the Chemotherapy Study Section of the National Cancer Institute, serving as Chairman of that group from 1965 to 1967. From 1950 to 1953, he was

a member of the Committee on Growth of the American Cancer Society. From 1950 to 1955, Dr. Seligman was a Member of the Council of the Histochemical Society, serving as Vice President (1953-1954) and President (1954-1955). From 1957 to 1959 and again from 1962 to 1966, he was a member of the Advisory Committee of Research of the Therapy of Cancer of the American Cancer Society. From 1958 to 1961 and 1967 to 1970, he was a member of the Board of Directors of the American Association for Cancer Research. In 1968, Dr. Seligman served as President of the Third International Congress for Histochemistry and Cytochemistry.

Dr. Seligman is a Phi Beta Kappa, and a member of Sigma Xi and Alpha Omega Alpha. He is also a member of the Boylston, Massachusetts and American Medical Associations as well as the Baltimore City Medical Society, New England Cancer Society, the Histochemical Society and numerous others. Dr. Seligman has authored numerous publications and serves as Associate Editor for the Journal of Histochemistry and Cytochemistry, the Journal of Biochemical and Biophysical Cytology (1950-1960), *Annales d'Histochimie and Histochemie*.

Design and Development of Cytochemical Methods for the Electron Microscope

Recent advances in the ultrastructural demonstration of enzymes have been based upon the use of an osmophilic staining principle, which provides methods for functional groups of macromolecules as well as for both hydrolases and oxidoreductases. At the time this principle was developed it was known that osmium of valence less than 8 has favorable properties for electron microscopy. Osmium tetroxide had been successfully used to stain unsaturated fat and as a fixative for electron microscopy to delineate membranous structures and other components of the cell containing unsaturated lipid or other reducing or chelating substances. Some remarkable properties of osmium include its relatively great solubility

(Continued on Page 7)

THE CHESAPEAKE CHEMIST

WELCOME...

The following people have recently joined the Maryland Section of the American Chemical Society. The Local Section welcomes each one and invites each member to attend Local Section meetings and to participate in Local Section activities.

Mr. Kirk J. Abbey,
Baltimore, Maryland
Joseph William Amshey, Jr.,
Baltimore, Maryland
Bernard R. Babbitt,
Pasadena, Maryland
SP5 Robert P. Burgner,
Taneytown, Maryland
Mrs. Mary Jane Caicuts,
Westminster, Maryland
Jing Shyong Chen,
Baltimore, Maryland
W. Robert Coley, III,
Baltimore, Maryland
William James Cooper,
Havre De Grace, Maryland
Mrs. Elizabeth W. Cunningham,
Severna Park, Maryland
Richard K. Eberts,
Lutherville Timonium, Maryland
Victor Alan Fishman,
Aberdeen, Maryland
Dr. Cecil H. Fox,
Annapolis, Maryland
Douglas Hamilton Gaither,
Frederick, Maryland
Margaret Louise Heidrick,
Baltimore, Maryland
Miss Myong Won Kahng,
Linthicum Heights, Maryland
Joseph Francis King,
Edgewood Arsenal, Maryland
Robert Moses Kolodny,
Columbia, Maryland
Dwo Lymm,
Baltimore, Maryland
Gary Leonard McKown,
Aberdeen, Maryland
David Earl McMahon,
Baltimore, Maryland
Miss Rosemary T. Milton,
Baltimore, Maryland
Mrs. Jean Ann Montemarano,
Annapolis, Maryland
Sister St. John Nepomucene,
Stevenson, Maryland
Dr. Alex Nickon,
Baltimore, Maryland
Mr. Kent Cassell Nicodemus, Jr.,
Walkersville, Maryland

Dues Reminder

All local section members should have received by this time their announcement of payment of Local Section Dues. If you have not received yours, please contact the Section Treasurer, Dr. Leon Weber.

Please note the Dues now include \$1.00 to help off-set the expense of the Remsen Memorial Lecture.

(Continued from Page 6)

and volatility at valence 8 (OsO₄), and at lower valence, its great insolubility and low volatility at the high temperature produced by the electron beam at 50 KV. Furthermore, when osmium tetroxide is reduced or chelated by cellular components, it is completely amorphous. This results in reliable delineation of the details of ultrastructure without imposing characteristics of its own, such as crystallinity or coalescence. It was an obvious extension to use osmium tetroxide for delineating the final steps of cytochemical methods for the electron microscope. However, the design of the methods require that the end-products of the cytochemical reactions have favorable properties of insolubility in both water and lipid to prevent coalescence and other artifacts before the ultrastructural pattern is fixed by osmication. Examples of new methods and their significance will be presented.

IF YOU CHANGE YOUR ADDRESS... Please do not notify the Editor of the *Chesapeake Chemist*, but send your new and old addresses to: The American Chemical Society, 1155 Sixteenth Street, N. W., Washington, D. C. 20036. The Maryland Section will then be notified.

MARYLAND SECTION 1971-1972 PROGRAM

<u>Date</u>	<u>Subject and Speaker</u>	<u>Time P.M.</u>
September 20, 1972	Maryland Chemist Award Dr. Arnold M. Seligman Chief, Research Oncology and Cell Biology, Sinai Hospital of Baltimore "Design and Development of Cytochemical Methods for the Electron Microscope"	8:30
October 18, 1972	Clinical Chemistry and Biochemistry Night Professor William G. Purdy Head, Analytical Division, Department of Chemistry, University of Maryland, College Park "Electrochemical Methods in Clinical Chemistry and Toxicology"	5:30
	Dr. David Kritchevsky The Wistar Institute "Diet and Atherosclerosis"	8:30
November 15, 1972	Medicinal Chemistry Night Dr. Henry C. Freimuth Former Chief Toxicologist, Office of the Chief Medical Examiner, Maryland "Alcohol: Boon or Bane"	5:30
	Professor Ralph N. Blomster Chairman, Department of Pharmacognosy, University of Maryland, Baltimore "Hallucinogenic Substances from Plants"	8:30
December 14, 1972 (Thursday)	Joint Dinner Meeting with Washington Section in Washington, D.C.	
January 14-17, 1973	No monthly meeting scheduled because of MARM in Washington, D.C.	
February 21, 1973	Chemistry and Space Science Dr. Thomas Wilkerson Institute for Fluid Dynamics University of Maryland, College Park "Composition of Interplanetary Plasmas"	5:30
	Professor Cyril Ponnampereuma Director, Laboratory of Chemical Evolution, University of Maryland, College Park "The Chemical Origin of Life"	8:30

MARYLAND SECTION 1971-1972 PROGRAM

<u>Date</u>	<u>Subject and Speaker</u>	<u>Time P.M.</u>
March 21, 1973	Bio-organic Night Professor Benjamin Weiss The Medical College of Pennsylvania "Neurochemical Aspects of Cyclic 3',5'-AMP"	5:30
	Professor Robert Bruce Merrifield The Rockefeller University "The Chemical Synthesis of Peptides and Proteins"	8:30
April 25, 1973	Chemical Manpower "Supply and Demand for Chemical Manpower: Present Realities and Future Prospects" Panel Discussion Mrs. Betty Vetter, Executive Director, Scientific Manpower Commission Dr. Robert Henze, ACS Division of Research Grants and Fellowships Dr. Alfred Brown, President, Celanese Research Company Dr. Fred Gornick, UMBC, Moderator	5:30
	Dr. Milton Harris, Consultant "Science and Technology in the '70's: Resuscitation or Renaissance"	8:30
May 23, 1973	REMSEN LECTURE Homewood Campus, The Johns Hopkins University	6:00

All monthly meetings except December, January and May will be held at Eudowood Gardens. The May 1973 meeting will be held at The Johns Hopkins University.

-----Tear-Out Dinner Reservation Form-----

There is enclosed \$.....(\$4.75 per person)* for dinner reservations at Eudowood Caterers, Eudowood Plaza, for the following persons.**

<u>Name</u>	<u>(Please print or typewrite)</u>	<u>Affiliation</u>
_____	_____	_____
_____	_____	_____

*Please make checks payable to Maryland Section, ACS and mail together with reservation form to Mr. Allen Bednarczyk, McCormick and Co., Inc., 204 Wight Ave., Hunt Valley, Md. 21031, or phone 666-3155.

**Return by Friday preceeding next meeting.
SEPTEMBER, 1972

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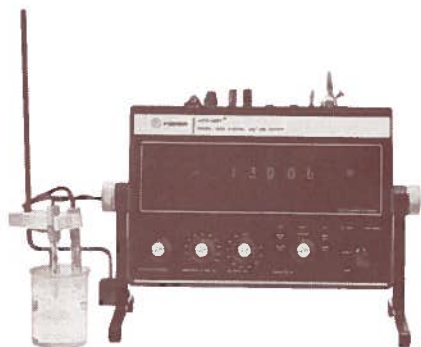
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EXECUTIVE COMMITTEE MINUTES

MINUTES OF MEETING OF EXECUTIVE COMMITTEE MARYLAND SECTION, A.C.S.
MAY 22, 1972 ALUMNI RATHSKELLER, LOYOLA COLLEGE, BALTIMORE, MD.

Present: E F. Silversmith, E. J. Puziomek, R.J. Kassel, F. Gornick, K. Zeller, J. Kolbe, P. Johnson, D. Roswell, A. Bednarczyk, F.T. Parr, L. Weber, J. Kaufman, Y. Caplan and B. Murr.

by section members in MARM activities.

The Member Assistance Committee plans to collect items that unemployed chemists could use to help them.

The report of the treasurer, L. Weber, was approved. There is \$7363 in cash on hand as of May 22, 1972. Of this, about \$1000 is earmarked for the scholarship fund.

E. Silversmith reported that one of our scholarship recipients, Mr. D. Dixon, is completing his second year in the Chemical Technician Program at Catonsville Community College. His third year will hopefully be financed through a work-study arrangement. The other recipient, Mrs. V. Taylor, is completing her first year.

Y. Caplan gave the report of the Program Committee. Currently, the status of the monthly meetings for 1972-3 is as follows:

The "Chesapeake Chemist" is currently operating at an annual deficit of about \$1000 per year, compared to about \$2500 per year before the switch to the offset process. The Committee voted to give the "Chesapeake Chemist" \$550 to cover current bills.

September 20 -

Maryland Chemist Award

October 18 -

Dr. David Kritchevsky will be one of the speakers; his topic will be "Chemistry of Heart Disease".

November 15 -

Program not definite.

December 14 -

Joint meeting with Washington Section at College Park, Md.

January -

No Maryland Section meeting because of MARM.

February 21 -

Tentatively devoted to "Chemistry of Space". An ACS film may be on the program.

March 21 -

Dr. Robert Merrifield will speak on "Enzyme Synthesis".

April 25 -

Program not definite.

May 16 or 23 -

Remsen Lecture.

B. Murr reported on items of interest at the National A.C.S. meeting in Boston. A probationary Committee of Professional Relations has been set up. Money was voted to "Chemical and Engineering News" since advertising revenue has fallen off. A proposal was made at the National Meeting that dues be raised from \$25 per year to \$35, the \$10 increase to be used for Professional Relations (investigation of lay-offs, providing mobile pension plans, etc.). Currently, the A.C.S. spends ca. \$5 per member per year on Professional Relations. In straw votes a majority of the Maryland Section Executive Committee rejected a permanent \$10 increase (one dissenting vote) but approved a \$10 increase for one year, after which time the matter would be reviewed.

The meetings other than those in December and May will be held at Eudowood. Costs will be \$4.75 for adults, \$3.00 for students. There will be a cash bar (perhaps company sponsorship of the bar can be obtained in some cases).

Respectfully submitted
Ernest F. Silversmith
Secretary

F.T. Parr of the MARM Committee stated that the Maryland Section has tentatively agreed to host the 1978 MARM. He urged more participation

These minutes are uncorrected, and are published for informational purposes only pending their acceptance at the next meeting of the Executive Committee.

SEPTEMBER, 1972

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University of Maryland
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Baltimore, Maryland 21201

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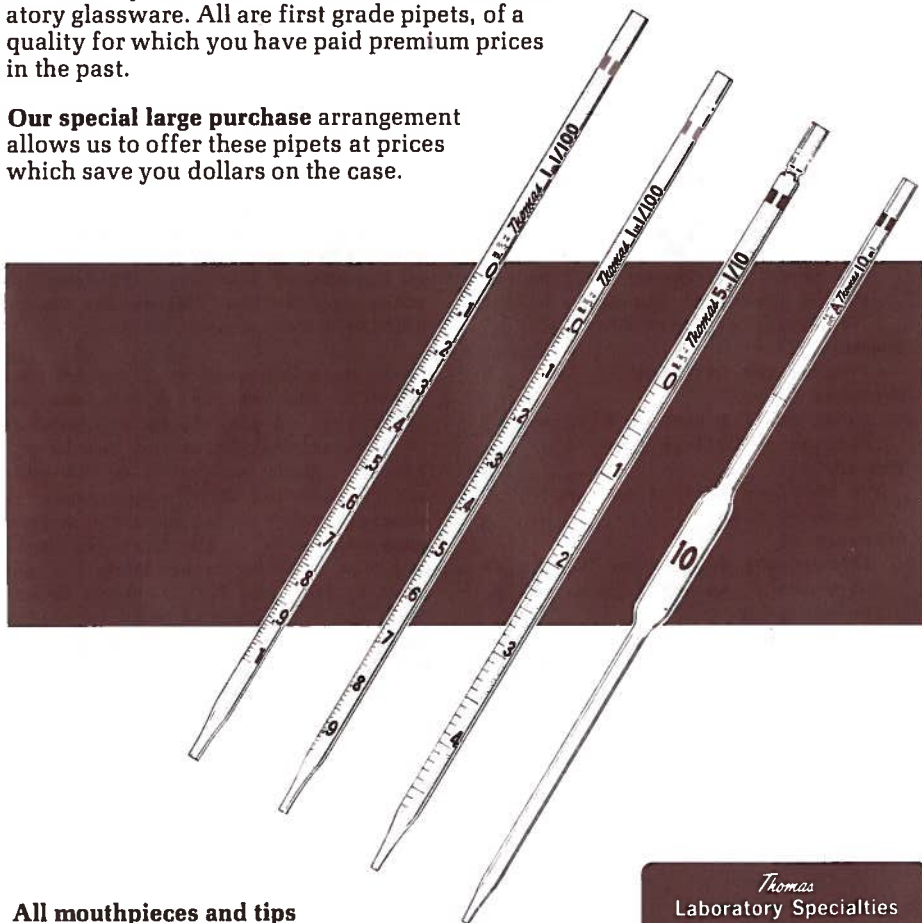
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