



THE

CHESAPEAKE CHEMIST

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. XXXV

APRIL, 1976

NUMBER 4



FROM THE EDITOR

Starting in May, your new editor is Eli Freedman. He has been associated with The Chesapeake Chemist since February 1974. In addition to preparing some of the best issues we have published, his article on Dr. Remsen will be reprinted in Chemtech.

I want to thank everyone who helped contribute to our publication and to remind our 1200 members that all of the work was volunteered. We tried to present information that all of our members would be interested in, rather than views that we alone subscribed to.

At this time, I would like to share some of the problems we had in the past which might explain why the more help you give your editor the better the publication. One month after I became editor, Mr. Quensen, the printer who handled our account for over 10 years, died. Mr. Quensen helped design our publication and made suggestions on how best to present the material. Mitch Dudnikov, Eli Freedman, Kent Zeller and I proceeded to learn the business the hard way. We put out bids in May 1974 and we accepted the lowest responsible bidder. It turned out to be Jack Doster of Associated Printers, a prince among printers. He educated us to the world of printing and the result was a professional looking magazine at approximately 2/3 the previous cost.

Linda Sweeting joined us this year as associate editor and prepared an outstanding February issue. Her book review in the January issue on "Rosalind Franklin and DNA" by Anne Sayre will be reprinted in Chemtech.

Without the editorial assistants, this publication could not be issued. I therefore want to give special thanks to Jo Lannon and Shirley Vecchio.

I want to thank George Walker and Steven Fitch of the Glidden-Durkee Div. of SCM for permitting me the time and secretarial help needed to prepare The Chesapeake Chemist.

Last, but not least, I want to thank my family for their understanding during some very trying times.

Howard J. Cohen

MAY YOU HAVE A

JOYOUS EASTER!



MAY YOU HAVE A

HAPPY PASSOVER!



THE CHESAPEAKE CHEMIST

VOL. XXXV

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DR. JOHN M. CASSIDY

John Cassidy was born in Vincennes, Indiana on August 16, 1938. His undergraduate education was at DePauw University, where he received a B.A. degree in 1960; he obtained his M.S. degree in 1962 and his Ph.D. degree in 1964 from Western Reserve University. Dr. Cassidy was NIH Postdoctoral Fellow (1965-1966) at the University of Wisconsin where he worked under the direction of Dr. S. Morris Kupchan on the isolation and structural elucidation of tumor inhibitors from plants. In 1966, he joined Purdue University as Assistant Professor and was made Associate Professor in 1970 and Professor in 1974.

ERGOLINES AS POTENTIAL PROLACTIN AND MAMMARY TUMOR INHIBITORS

The majority of available anti-tumor agents exert their effects by virtue of a differential toxicity to rapidly growing tumors. Certain anti-tumor agents have been developed on the basis of biochemical reasoning with the best examples occurring among the antimetabolites. The dependence of certain breast tumors on the hormone prolactin opens an approach to chemotherapy by the design and synthesis of prolactin inhibitors. The ergolines have been shown to effectively inhibit prolactin and members of this class, including Lilly's lergotrile and Sandoz's CB 154, are undergoing clinical evaluation in the treatment of breast cancer.

This presentation will outline approaches to the synthesis of ergolines and related compounds with the objective of designing compounds with increased potency, duration of action, and specificity of action as prolactin inhibitors. The establishment of the relationship between ergoline structure and antiprolactin activity will also be reported.

MICHAEL D. LOBERG

Dr. Loberg was born in St. Louis, Missouri in 1947. He attended Trinity College, Hartford, Connecticut and graduated in 1969 with a B.S. in Chem-

istry. From there he returned to St. Louis and Washington University where he received a Ph.D. in Radiochemistry in 1973 from what, at that time, was a new interdisciplinary program between the Department of Chemistry and Radiology. In 1973 he was appointed Assistant Professor of Pharmacy and Medicine at the University of Maryland and remains there at present, serving as Chief of Radiopharmaceutical Services. His current research interests center around the development of radiopharmaceuticals for use in Nuclear Medicine and include the cyclotron production of various radionuclides, the purification and radioiodination of autologous fibrinogen for use in the diagnosis of renal transplant rejection, and most recently the development of bifunctional drug analogs capable of binding radioactive metals.

CHEMISTRY, NUCLEAR MEDICINE, AND RADIOPHARMACEUTICALS

Radiopharmaceuticals are radioactive drugs whose distribution, metabolism, and elimination can be measured within the body by virtue of their radioactivity. The emitted radiation is then used to reconstruct organ images which differ from conventional X-ray images in that image intensity is proportional to regional metabolic activity rather than density. This ability to measure regional function within a given organ assumes increasing significance as more and more disease processes are being characterized in terms of disordered biochemical function. The design of effective radiolabeled substrates represents a new challenge to both the radiochemist and medicinal chemist.

The presentation will give both an overview of the workings of nuclear medicine as well as a brief historical perspective of the role of the chemist in radiopharmaceutical design. Finally, it will examine the radiopharmaceutical research currently being conducted at the University of Maryland between the Departments of Medicinal Chemistry and Medicine. Examples will be presented for the early diagnosis of renal transplant rejection and for the quantitative measurement of regional hepatobiliary function in the presence of jaundice.

APRIL MEETING

DATE:

Wednesday, April 21, 1976

PLACE:

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

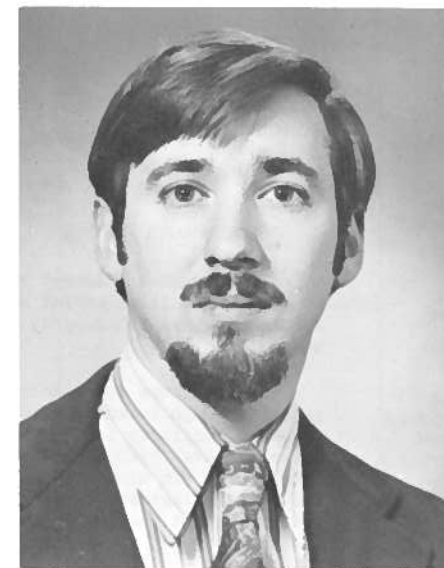
SPEAKERS AND TOPICS:

5:30 PM
Dr. John M. Cassidy
Purdue University
"Ergolines as Potential Prolactin
and Mammary Tumor Inhibitors"

8:30 PM
Dr. Michael Loberg
University of Maryland
"Chemistry, Nuclear Medicine, and
Radiopharmaceuticals"

SOCIAL HOUR:

There will be a social hour
after the meeting. Refreshments
will be served.



DR. MICHAEL LOBERG

COCKTAILS AND DINNER:

Eudowood Gardens Dining Room
Cocktails 6:30-7:15 courtesy of
Fisher Scientific Company
Hot buffet dinner (7:15) \$5.50
per person. Retired chemists,
students and their spouses may
attend the dinner at \$3.50 each.
Reservations are necessary for
the dinner and should be made
with

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(Or phone: 247-0700, x283 or 261)

It is not necessary to be a member
of the American Chemical Society
to attend the dinner or the talks,
and the talks may be attended with-
out attending the dinner. You are
invited to bring your wife and
friends to both the dinner and the
meeting.



DR. JOHN M. CASSIDY

THESE 18 CHEMISTS NEED HELP*

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DR. GEORGE W. RATHJENS
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DR. JEREMY J. STONE
Director

We very much welcomed your readiness to help in corresponding with a Soviet refusenik scientist and have provided the name and address (or names) on the attached index card, following, wherever possible, your own suggestions.

Your letters are likely to be opened, and the chances of their being passed through is enhanced if they avoid too much in the way of political or other sensitive issues. Most of the scientists will read English and all will have friends who do. In trying to get letters through the censorship, you might try a mixed strategy of letters that are registered and letters that are unregistered. With registered letters, you can have a return receipt requested sent to you, but if it does come back, check that the signature of your scientist is on it because they often come back without it.

Scientific materials and dictionaries of various kinds are very useful to the refuseniks in keeping their scientific careers alive and, indeed, such books can be resold if necessary to permit the refuseniks to maintain themselves. Whether the books will arrive is another matter; sometimes they do and sometimes not. However, books on political matters would not be expected to arrive through the mails. Also please note that postal regulations do not permit enclosure of first class letters with books; each must be sent separately. (But postal rates for sending books abroad are very cheap.) Carrying scientific materials or dictionaries through customs is not a problem, so if you or friends are traveling to the Soviet Union, it is possible that such materials might be taken along with you.

We would like to be kept informed of the problems you meet in this effort and would like you to advise us if and when you receive some reply from your correspondent.

I would like to send you my warm personal thanks for your involvement in this matter; we will be in touch with you if we get any information about your adopted scientist.

Sincerely,

Jeremy J. Stone

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* Editor's Note:

There are several hundred scientists who need scientific correspondents while they are waiting for the Soviet Union to grant them an exit visa. If you would prefer to adopt a scientist in your discipline, contact Dr. Stone. Meanwhile, a simple letter is imperative to the above 18 Chemists to insure their survival.

HJC

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NICK NACKS

by ALAN C. NIXON

MEET THE AMU

Medical World News of January 12 ran a story headlined "The AMA in Honolulu: More like a Trade Union." The December meeting, they said made it clear that the AMA has become less of a scientific organization, more of a trade union. The House of Delegates strongly supported the right of physicians to bargain collectively; declared that interns and residents are employees as well as students and therefore should be protected by the NLRA; said the AMA had a responsibility to protect junior members of the profession against economic exploitation; approved the Board of Trustees decisions to set up a Department of Negotiations (budget - \$200 K) to help physicians bargain in a tougher way with hospitals, third parties, and government agencies; voted to expand the AMA's already extensive lobbying efforts; demanded that doctors be compensated for time spent in government mandated peer review activities even if it means raising hospital rates; opposed HEW's plan to curb MD fees under Medicare and opposed state efforts to hold down Medicaid costs by buying generic drugs en bloc. To emphasize that the AMA is turning more and more inward, the hottest item on the agenda was a plan for sweeping reorganization of the House of Delegates and the AMA itself. Another item was a recommendation that would make it more difficult for foreign medical graduates to obtain licenses to practice in this country. The trend from the scientific towards the political in the society was underlined by the fact that not one original medical paper was presented at the convention. The AMA is in excellent financial shape, expecting a \$10 million surplus for the current year based on an almost 90% return on the \$60 assessment of last year and a jump in dues from \$110 to \$150 (they expect this will cause an 11% drop in membership).

While the AMA is heading towards unionism, it is not primarily directed against their employers (their patients) since they already have them over a barrel (or a gurney) but rather against the government which is trying to protect the patients.

OUTBOARD WASTAGE

A recent item from CSPI notes that it sent a letter to Frank Zarb, the "federal energy czar," expressing dismay that the four major outboard engine manufacturers are increasing their 1976 "top of the line" engines up to 50% more power than in 1975 (i.e. up to as high as 200 horsepower). This definitely seems a step in the wrong direction since it will increase the already generous amount of petroleum resources devoted to disturbing the air-water interface. CSPI points out that this country consumes more petroleum products in pleasure boating than does the entire nation of India, for all purposes.

SOUR SEEDLING

The following was received from some anonymous member from Denver, CO in response to the appeal to ACS members to contribute to Project SEED: "You fellows must be completely out of your damn minds. As a chemist with PhD I make less than a steam fitter. My job is coming to an end in a few short weeks and you ----- want me to contribute to training more chemists. "You should instead be working toward a STRONG UNION for all Scientists and Engineers. That's the American Way."

Unfortunately our correspondent doesn't appreciate two things: 1. That Project SEED is not intended to create more chemists - it just tries to ensure that we do not prevent disadvantaged students from having a chance to become chemists and (2) a union cannot create jobs or prevent people from being laid off - in fact, the existence of a union can decrease the number of jobs available.

WHAT MAKES A PERSON CREATIVE

In the January 5 issue of Chemical Engineering there was an article by Eugene Raudsepp of Princeton Creative Research, Inc. who has an article headed, "What Makes an Engineer Creative." It seemed to me that the same principles can be applied to any creative person. Raudsepp says,

"you can increase your creativity by consciously cultivating characteristics that have been identified by behavioral science research as being unique to the creative..." His article can be readily summarized simply from the section headings. He says these are the things a creative person has to have: Sensitivity to problems, Fluency and flexibility, Youthful curiosity (independent of age, Originality and openness (in thinking and tolerance of others ideas), Self-confidence to dare (don't be afraid of what others say), Freedom from fear of failure, Openness to experience and subconscious (have "flexible repressions"), High motivation vs. "success," "Inordinate persistence (creation is preceded by hard thinking, prolonged reflection, and concentrated hard work), single-minded concentration, Ability to toy with ideas, Tolerance of ambiguity and complexity, Ability to analyze and synthesize, Selectivity-what's really important, Creative memory, not just memory, Anticipation of productive periods. So there you have the formula. If you want to know more, read the article.

BALLISTIC RESEARCH LABORATORIES

Eli Freedman has transferred from the Combustion and Propulsion Branch to the Physics Branch of the Interior Ballistics Laboratory.

U.S. CUSTOMS LABORATORY

In commemoration of the American Chemical Society Centennial, Mr. Paul Lawrence, Regional Commissioner of the U.S. Customs Service has extended an "open house" invitation to our membership to view their laboratory facilities in Baltimore, to meet and talk with the members of their technical staff on Friday, April 9, 1976 from 9 A.M. to 5 P.M. The basic discipline of the professional staff is, of course, analytical chemistry. The laboratory is located on the seventh floor of the Appraiser's Stores Building, 103 South Gay Street.



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CIVIL SERVICE

The Committee on Professional Relations' Civil Service Liaison Subcommittee is interested in hearing from chemists and chemical engineers involved in government reductions-in-force (RIFs). This subcommittee, formed in 1975 to study the problems of chemical scientists working for the federal government, held its most recent meeting in Washington on November 25, 1975. Because there have been severe cutbacks of professionals in some agencies in the past several years (and further cutbacks are planned), the subcommittee decided to focus on how chemical professionals fare in RIF situations.

If you have been involved in a RIF action, please write to Mr. Klinefelter, Manager of the Office of Professional Relations, at ACS headquarters, 1155 Sixteenth St. N.W., Washington, D.C. 20036. Also, the subcommittee is interested in comments members may have on any aspect of government employment. Any information you provide will be used by the subcommittee for study purposes only and your name will be held in strict confidence.



PHILADELPHIA HOST

The Engineer' Club of Philadelphia (ECP) will host engineers, scientists, and their families who wish to visit Philadelphia during the 1976 bicen-

ennial celebration. Interested ACS members are asked to contact ECP as early as possible. For more information, write H. R. Paxson, Engineers' Club of Philadelphia, 1317 Spruce St., Philadelphia, Pa. 19107.



VIEWPOINT

From Gulag, here is Solzhenitsyn's credo, after long imprisonment, censorship, and persecution, as to how one should live: "Do not pursue what is illusory--property and position; all that is gained at the expense of your nerves decade after decade is confiscated in one fell night. Live with a steady superiority over life--don't be afraid of misfortune and do not yearn after happiness; it is after all, all the same: the bitter doesn't last forever and the sweet never fills the cup to overflowing. It is enough if you don't freeze in the cold and if thirst and hunger don't claw at your insides. If your back isn't broken if your feet can walk, if both arms can bend, if both eyes see and if both ears hear then whom should you envy? And why? Our envy of others devours us most of all. Rub your eyes and purify your heart--and prize above all else in the world those who love you and who wish you well. Do not hurt them or scold them, and never part from any of them in anger; after all, you simply do not know; it might be your last act before your arrest, and that will be how you are imprinted in their memory!"

----- TEAR OUT DINNER RESERVATION FORM -----

Enclosed is \$ _____ (\$5.50 per person)* for dinner reservations at Eudwood Caterers, Eudwood Plaza, for the following persons**.

NAME (Please print or type) AFFILIATION

*Please make check payable to Maryland Section, ACS, and mail together with reservation form to Dr. John Kolbe, c/o Martin-Marietta Laboratories, 1450 S. Rolling Road, Baltimore, MD 21227. Or phone 247-0700, ext. 283 or 261. ASK FOR ACS RESERVATIONS.

**Return by Friday preceding next meeting.



The State of Maryland
Executive Department

GOVERNOR'S PROCLAMATION

Chemistry Week
April 4-9, 1976

WHEREAS, The work of chemists and chemical engineers has greatly enhanced our way of living, simplifying difficult tasks, improving materials and methods and supplying a vast number of previously unknown products for use only on our earth, but in interplanetary exploration as well; and

WHEREAS, For one hundred years the American Chemical Society has been a focal point for research into chemistry and chemical engineering in our Nation, guiding scientific communication through journals and reports; and

WHEREAS, The 110,000 chemists and chemical engineers of the American Chemical Society through their 175 local sections provide chemical information to federal, state and local governments, and the public;

NOW, THEREFORE, I, MARVIN MANDEL, Governor of the State of Maryland, do hereby proclaim April 4-9, 1976, as

CHEMISTRY WEEK

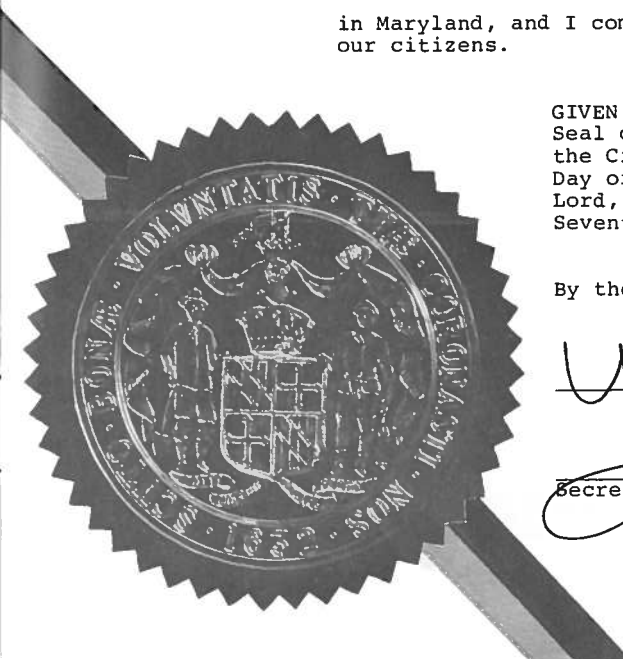
in Maryland, and I commend this observance to all our citizens.

GIVEN Under My Hand and the Great Seal of the State of Maryland, in the City of Annapolis, this 16th Day of March, in the Year of Our Lord, One Thousand Nine Hundred Seventy-Six.

By the Governor:

Marvin Mandel

John L. Wiseland
Secretary of State



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