



# NEWSLETTER

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Editor: Dennis Paul Valenzano, Department of Physiology, University of Kansas  
Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66213 Tel: (913) 588-7416

• • • • No. 122 Aug/Sep 1989 • • • •

## Boston Meeting a Stunning Success

The XVIIth Annual Meeting at the Lafayette Hotel in Boston was an exceptionally successful one. We had over 400 registrants, a record by far. The larger number of registrants contributed to the fact that the meeting appears to have been the first one in history to have made a profit. There appear to be several causes for the large turnout: 1) the excellent scientific program arranged by Tom Coohill, 2) the photodynamic therapy workshop which preceded the meeting, which led to a certain

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amount of cross registration, and 3) holding the meeting in Boston, which is a popular location.

There were a number of excellent symposia; the one that had the most press attention was one on stratospheric ozone depletion and its biological consequences. Stories appeared in both the Boston Globe and the Boston Herald as a result of a press conference held with the symposium speakers. The full text of these articles appears on page 4 of this Newsletter.

There were also a number of unusual special lectures such as one which explained how electromagnetic radiation is used in art conservation and restoration, and one on carbohydrates, light, and seasonal depression. The clambake, which was organized by Madhu Pathak, was also a great success both from a culinary and social point of

view. Indeed, the hotel seems to have felt that this was an even bigger success, since they counted 40 more people attending it than we did.

I have not been given adequate space to discuss the scientific program, which was outstanding. My only regret was that as President, and in transition to Past President, there was precious little time for me to attend the scientific sessions.

— C.S. Foote

### Newsletter's Late

Due to unusually unfavorable timing of the Society's Annual Meeting, a breakdown of the computer system on which the Newsletter is edited, and my vacation, this issue of the Newsletter will reach you quite late. I apologize for any inconvenience this may have caused. You can expect your Oct/Nov issue at its regular time.

— Dennis Valenzano, Editor

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**THE GUIDING LIGHT**  
From the President's Desk

Dear members,

Recently, the Society, its officers, and Council made it their first priority to place ASP on a firmer financial footing. Income (mostly from P&P) has been steady, but has not kept pace with inflation. Thus, the Society's net assets have essentially decreased. Several years ago a decision was made to have the equivalent of a 2 year operating budget in savings, to ward off serious decreases in income and to benefit from the interest generated by these savings. That amount would be about \$500,000, a sum far in excess of what we have now (\$162,000).

After careful scrutiny of the budget, the Executive Committee and Council have pointed out possible areas for saving in the future.

1) Council travel - The duty of the fall council meeting (Nov) was to approve the budget. This is now done at the annual meeting. As a 1 year experiment, we are suspending this year's fall council meeting, thereby reducing council from three to two meetings a year. This will save \$10,000. We hope to accomplish any needed business by conference calls. This change will be carefully reviewed at the annual meeting in Vancouver.

2) Cost of annual meetings - Since 1976, our annual meetings have lost as much as \$24,000. Most societies make money on their annual meeting. Chris Foote (now past-president), Mickey Mathews-Roth (president-elect), and I made a determined effort to bring our annual meetings in at cost. Chris greatly reduced - to \$7,000 - the expected loss for the 1988 meeting. This year we were able to run the Boston meeting in the black, although we budgeted a \$15,000 loss. Final figures are not yet available, but it looks like we may make a profit of several thousand dollars. If the earlier trend had continued, we would have been faced with a 1990 budget surplus projection of a mere \$700, but if the Vancouver meeting can break even, we'll have a more manageable surplus of about \$20,000.

So we seem to be on our way to a more secure financial future. This was accomplished by your support of the Boston meeting - over 400 registered, a record, we believe - and by trimming costs without visibly affecting quality.

Let me close this, my first column, by asking that members continue an old ASP tradition. All compliments should be directed to me; all complaints to Past-President Chris Foote (address: Department of Chemistry, UCLA).

- Tom Coohill

**SOCIETY HIGHLIGHTS**

Four members of Council completed their 3-year terms of office at the annual meeting in Boston. Many thanks to

Homer S. Black  
Takashi Ito  
Madhukar A. Pathak  
Robert M. Sayre

## Terms End, Change

for their many hours of service on behalf of all the membership.

The results of the recent ballot issue to change the term of office of the editor of P&P were also announced at the Boston meeting. Our journal's editor will now serve a four year term, as do the associate editors.

**SIDELIGHTS**

## Treasurer's Report on ASP Finances

ASP income derives from Journal-related revenue and Non-Journal sources. The former relates to a share in the operating profits provided by Pergamon Press, page charges, and subscriptions. Non-journal income comes from the annual meeting, contributions, dues, interest on bank accounts, and miscellaneous sources.

Journal-related expenses involve costs of operating the editorial office, expenses of editors, and any pages published which are in excess of the number provided by our contract with Pergamon. Other expenses relate to the Secretariat (which organizes our meetings, collects dues and oversees other Society operations), costs of the annual meeting, Newsletter, Sigma Xi lecturer, student and research awards, Council travel and periodic publishing of the ASP Directory.

Since ASP owns P&P, we can obtain a substantial income from the journal, and this represents our main revenue source. Editorial and Secretariat costs represent our major expenses. The Council was charged, a few years ago, with op-

erating under conditions which will eventually put a 2-year expense budget in the bank, which means approximately \$500,000. At present, we are up to \$162,000.

Although the annual meeting involved a net loss during recent years, this has lately diminished and expectations are that the 1989 Boston meeting will produce a profit. We also lose money on each journal subscription for members, but library subscriptions result in a net gain.

The balance sheet shows a gradual net improvement during the past few years, with profits ranging from \$5000 - \$20,000. To promote this trend, Council has decided to eliminate the fall council meeting on a trial basis (\$10,000), and to promote programs designed to bring in additional funds, e.g., more sustaining memberships. The annual meetings will be programmed to break even or better.

The results of the 1988 audit will be summarized in the next Newsletter issue.

-David Kessel, Treasurer

## Confessions in Bioluminescence

### Recollections of Beatrice Sweeney

*The following is the last of a two part article written by Beatrice Sweeney. It represents her recollections and impressions of the origin and early years of the ASP. President of the ASP from 1979 to 1980, Bea is a Professor of Biology at the University of California, Santa Barbara.*

The first meeting of ASP was in Sarasota, Florida in June, 1973. I remember this meeting because of the glorious beach where we could swim every afternoon. Interesting molluscs could be seen crawling about on the sandy bottom. Many of the meetings of ASP have been in beautiful places including Boulder and San Juan, Puerto Rico. This last meeting was particularly fun for us who are interested in bioluminescence. On the beach by the hotel in San Juan were luminous *Cypridina* and a number of us, including Howard Seliger and Govindjee, visited the Bay of Fire in Paguera after the meeting to see the brilliant bioluminescence of *Pyrodinium bahamense* from a boat of our own, lent us by the lab there and captained valiently by Howard.

The diversity of the membership of ASP has always been an added attraction. This is at least in part the result of the origin of ASP in the Committee for Photobiology of NRC, the members of which represented all fields of photobiology. Thus at meetings I can learn about the dangers of tanning booths, light treatment for skin disease, vision and photosynthesis, as well as bioluminescence and chronobiology, my own fields of research. I hope that ASP will always retain this diversity of interests.

Beatrice M. Sweeney  
Dept. Biological Sciences  
University of California  
Santa Barbara, CA 93106

## Thomas P. Coohill

Thomas P. Coohill is Professor and Head of the Department of Physics and Astronomy at Western Kentucky University. A native of Brooklyn, New York, he received his undergraduate degree in physics at the University of Toronto, his M.S. in physics at the University of Toledo, and his Ph.D. in biophysics at Penn State. John Turin, at Toledo, suggested the then new area of biophysics to Tom and gave him a copy of Setlow and Pollard's *Molecular Biophysics*. His interest piqued, he decided to study in Pollard's department at Penn State. His graduate work in photobiology was directed by R.A. Deering. Tom not only learned his science at Penn State, but was very influenced by Pollard's regard for teaching and his sensitive administration. Tom's WKU awards in teaching, research, and overall excellence owe much to Pollard's inspiration.

Tom's research interest has been the effects of UV radiation on living organisms and has included work with viruses, bacteria, fungi, mammalian cells, and most recently, the nematode, *C. elegans*. His specialty is action spectroscopy, and the use of various UV sources for bio-medical research. He is particularly concerned with the absorption properties of cells and viruses in the



wavelength range from the vacuum UV to the visible. To take advantage of special facilities, he has pursued his work at Brookhaven, Argonne, the Lawrence Berkeley Laboratory and the Marine Biological Lab (Woods Hole). Tom and his students discovered that a Large Plaque Effect occurs when lightly irradiated cells host Herpes virus, and they helped to develop an SV40 mammalian cell inductest for putative carcinogens. More recently, at the Jet Propulsion Lab of Caltech, he took part in a team effort that will launch a radiobiological experiment on a future space shuttle. Currently, he is concerned in estimating the potential biological consequences of stratospheric ozone depletion due to increased UV-B

Since joining the society in 1973, Tom has been an active member of council and was, for five years, the Society's Newsletter editor. He loves to travel and to tell stories, especially about his trips. He is currently on an around-the-world lecture tour that will include stops in South Korea, Beijing, Moscow and Budapest.

# Boston Globe and Herald Cite ASP

Once again the ASP's annual meeting attracted a considerable degree of interest from the press. Last year, as a result of interviews at the Colorado Springs meeting, stories mentioning the ASP appeared in the New York Times, the San Francisco Examiner, and Los Angeles' Orange County Register. This year in Boston, a press conference was held at which symposia speakers were interviewed by members of the press. This resulted in stories in both the Boston Globe and the Boston Herald which mentioned the ASP and its members. The text of these articles is reprinted below. A picture of Tom Coohill and Sharon Moore accompanied the Herald article. Please remember to mention the ASP as a source of expertise in photobiology if you are contacted by the press. Promotion of the dissemination of knowledge of photobiology is a major goal of the ASP.

## Hub confab explores ozone-skin cancer tie

By SUSAN BRINK

SUN WORSHIPERS keep hitting beaches, backyards and tanning booths, even though the incidence of skin cancer has increased 100 percent in the past 18 years, and it is clearly linked to overexposure.

Scientists gathering in Boston this week are trying to determine if that hike is related to a 2 percent to 3 percent depletion in the earth's ozone layer. The less ozone there is to shield the planet, the more harmful ultraviolet rays bombard us.

At a meeting of the American Society for Photobiology yesterday at the Lafayette Hotel, it seemed they could barely suppress an exasperated scream.

"Mad dogs, Englishmen and American tourists go out in the midday sun," said Dr. F. Urbach of Temple University.

In spite of all the warnings, 600,000 new cases of non-melanoma skin cancer are diagnosed each year.

"It has been characterized as a quiet, 20th century epidemic," said Dr. John Epstein of the University of California.

Non-melanoma skin cancer is either basal cell or squamous cell carcinoma, and is clearly related to sun exposure, he said.

There are less dangerous forms of cancer than melanoma, which is almost always fatal. The sun's role is less certain in malignant melanoma, which has 29,000 new cases reported each year, mostly in people 20 to 40 years old.

"It is the fastest growing increase of cancer, except for lung cancer in women," said Dr. Thomas Fitzpatrick of Harvard Medical School.

And the evidence is mounting that melanoma, too, is related to exposure to the sun and to ozone depletion, experts said.

The dramatic increase in skin cancer of all kinds, said Urbach, may be due to things other than ozone depletion.

"It may be due to the fact that more people spend more time outside. It may be that more people have more money and can afford to go places where they can get cooked," said Urbach.

— Reprinted with permission from the Boston Herald, Thursday, July, 6, 1989

## Ozone loss is seen as threat to body's immune system

By Richard Saltus  
Globe Staff

Citing new evidence that ultraviolet radiation in sunlight can weaken the body's natural defenses, scientists said yesterday that thinning of the earth's ozone layer might increase people's vulnerability to infectious diseases.

Developing countries where infectious diseases are already rampant will probably suffer most, said Margaret L. Kripke, head of immunology at the M.D. Anderson Cancer Center of the University of Texas.

Scientists have previously warned that depletion of the stratospheric ozone layer will allow more harmful ultraviolet radiation to reach earth and cause a dramatic increase in the rate of skin cancer. The destruction of the protective ozone layer has been linked to the release of man-made chemicals that drift up into the atmosphere.

Kripke and other scientists have found that increased ultraviolet light can dampen or completely turn off one part of the immune system, the network of blood cells and chemical substances that protects the body against foreign invaders.

Kripke said an investigator in her laboratory has shown that mice exposed to doses of ultraviolet light could not mount strong immune responses to a common disease-causing fungus, candida albicans.

The reason, Kripke said at a meeting in Boston of the American Society for Photobiology, is that the ultraviolet radiation

shut down the part of the immune response that is governed by white blood cells called lymphocytes. The radiation evidently stimulates the production of "suppressor cells" that act as a brake on immune defenses.

Such experiments in animals are only the beginning of a growing effort to determine how ultraviolet radiation in sunlight affects humans, she cautioned. But she said most researchers agree that, in addition to expected increases in skin cancer, damage to the immune system is one of the biggest potential health problems of continued destruction of the ozone layer.

Increased ultraviolet exposure would probably not destroy the immune system, as AIDS does, or cause epidemics among otherwise healthy people, said Kripke. More likely, people who already have infections would be more seriously ill or take longer to recover or get diseases more often, she said.

On the other side of the coin, the effect of ultraviolet radiation on the immune system may have some medical benefits, noted Kripke. Because it selectively squelches one part of the immune response, ultraviolet radiation is being studied as a means of blocking rejection of transplanted organs.

In addition, ultraviolet radiation may be an effective way to turn down the immune response when it goes awry.

— Reprinted with permission from the Boston Globe, Thursday, July, 6, 1989

# Changes at Temple University

Three institutional names which are closely associated with cutaneous photobiology and with the formation of the American Society for Photobiology are passing into photobiologic history. We who have been associated with these names would like to thank our colleagues for their encouragement, collaboration and support.

The Dermatology Department of Temple University will terminate its photobiology research program and its residency training program in June, 1989. The department was chaired for more than 20 years by Frederick Urbach, a charter member of the Society and its fifth president. Fred will retire from Temple later this year to devote his time to consulting activities and clinical research.

Photobiologic research activity within and beyond the department was organized as the Center for Photobiology, directed by Fred Urbach; past and present faculty of the Center who were founding or early members of the Society include Harold Blum (dec), Thomas Sisson (dec), Daniel Berger (ret), Donald Forbes, Ronald Davies, Christopher Sambuco and Curtis Cole. The Center for Photobiology contributed substantially to research relating to the effects of ozone depletion. An international ambient UV monitoring network, consisting of meters designed by Donald Robertson

of Queensland and Daniel Berger of the Center, was set up, maintained and coordinated by Center personnel for more than a decade. Network data, together with biologic studies at the Center and at the University of Utrecht, provided the necessary background for interpretation of skin cancer epidemiologic data gathered by the National Cancer Institute and by investigators in Australia, Ireland and the Center for Photobiology. In addition, radiation delivery and measurement systems, animal models and experimental designs developed at the Center are in widespread use in clinical and investigative photobiology.

The Dermatology Department developed from merger of the Skin and Cancer Hospital of Philadelphia with Temple University. The name Skin and Cancer Hospital survives as the name of the building which housed the department for nearly 25 years.

In 1962, the department hosted the first International Conference on the Biology of Cutaneous Cancer; in 1966, it co-hosted, with the International Society of Biometeorology, the first International Conference on the Biological Effects of Ultraviolet Radiation. In 1984, it was host institution for the Twelfth Annual Meeting of the Society and the concurrent Ninth International Congress of Photobiology.

We are pleased to report that photocarcinogenesis safety and efficacy testing will move to a newly-created Center for Photobiology at Argus, Inc. (A Member of the Argus Group) in Horsham, PA, where Chris Sambuco will lead a team of relocated Temple personnel. Don Forbes and Ron Davies will remain at Temple but will also be involved with the development of the new Center, as well as with academic research and consultation. We look forward to creation of a dynamic new program, as well as to continued association with the Society and with our many friends and colleagues.

— Submitted by Don Forbes

## Nominations Deadline

As Chair of the Nominating Committee, I am canvassing for nominees for President, Secretary-Treasurer, and 4 Council seats that become vacant in 1990. I have received a large number of excellent suggestions and would appreciate additional ones. You should also be aware that members may directly nominate officers by submitting signed petitions. Nominations for officers (President and Secretary-Treasurer) may be made by 10 members and for Council by 5 members. A written statement by the nominee of willingness to serve must be received. Suggestions and petitions should be sent to me before 15 Nov 1989. After all suggestions have been received, the Nominating Committee will select at least 2 candidates for each office, attempting to provide the widest possible representation among the subdivisions of photobiology.

— C.S. Foote

## Attention Conference Organizers

**Conference organizers**, you can publicize your meeting/course in the Newsletter in various ways. A simple announcement on page 7 and inclusion in the calendar on page 8 is free for photobiologically relevant events. You may also have a small (folded 8.5 x 11 inch) brochure mailed with the Newsletter to our mailing list of 1600 worldwide. The fee for this service is \$250 if you provide the brochure, \$400 if you want us to produce a simple single page insert. More involved brochures may be obtained at higher cost.

## New Titles

### Radiation Measurement in Photobiology

Ed.; B.L. Diffey

Academic Press, Book Marketing Department, 1250 Sixth Avenue, San Diego, CA 92101-4311  
248 pages, Feb 1989, ISBN: 0-12-215840-7  
£ 29.50

### Spectrophotometry and Spectrofluorimetry: A Practical Approach

Ed.; D.A. Harris and C.L. Bashford

Includes chapters on Measurement of Ligand Binding to Proteins, Spectrophotometry and Fluorimetry of Cellular Compartments, and Determination of Photochemical Action Spectra.

IRL Press Ltd., 176 pages, 1987  
ISBN: 0-947946-46-2  
\$36.00



### Photodynamic Therapy - The Market, Technology and Future Potential

A comprehensive overview of PDT today, including technical data on photosensitizing compounds, light sources, delivery systems, training programs, companies producing applicable hardware and centers conducting clinical trials.

Pamela G. Goforth, Medical Technologies Development, P.O. Box 1029, Santa Ynez, CA 93460.

Tel. (805) 688-0042

\$1,985.00, about 200 pages

## NEW BROCHURE

A four-color brochure on Hitachi Instruments Model F-2000 spectrophotometer is now available. The brochure describes a wide range of software and options including the "intracellular cat-ion" option designed for determining calcium concentration and pH in living cells. Contact Hitachi Instruments, Inc., 15 Miry Brook Rd., Danbury, CT, USA, 06810, Tel.: (800) 548-9001, FAX: (203) 748-4669.

## FYM\*

One of the avowed goals of FYM is the nurture and propagation of creative obfuscation. To that end consider the following.

$$1 + 1 = 2 \quad (1)$$

Or, using simple identities,

$$\ln e + (\sin^2 \delta + \cos^2 \delta) = 2.$$

Recall that  $\sum_{n=0}^{\infty} (1/2^n) = 2$ , so that,

$$\ln e + (\sin^2 \delta + \cos^2 \delta) = \sum_{n=0}^{\infty} (1/2^n).$$

Then since  $e = \lim_{\xi \rightarrow \infty} (1 + 1/\xi)^\xi$  and

since  $1 = \cosh \gamma (1 - \tanh^2 \gamma)^{0.5}$ , we arrive at,

$$\ln \left[ \lim_{\xi \rightarrow \infty} (1 + 1/\xi)^\xi \right] + (\sin^2 \delta + \cos^2 \delta) = \sum_{n=0}^{\infty} \frac{\cosh \gamma (1 - \tanh^2 \gamma)^{0.5}}{2^n}$$

which is infinitely more gratifying than Eq. 1!

\* For Your Misinformation

The editor, the Secretariat, and the ASP assume no responsibility concerning the veracity of this claim.

THE LIGHT AT THE END OF THE TUNNEL

Positions Available

## POSTDOCTORAL RESEARCH ASSOCIATE

A postdoctoral research position will become available starting September 1, 1989 for a person interested in investigating the  $O_2^-$  evolving process of photosynthesis, photosystem II reaction center complexes, and the properties of photosynthetic membrane surfaces. Areas of interest include structural, biochemical, biophysical, and molecular biological studies. The position is for one year with the possibility of extension depending on research progress and availability of funding. Additional opportunities are available through a competitive NRC/SERI program (Aug and Jan closing dates). Salaries are highly competitive. Send a CV, short statement of research interests, and names with phone numbers of three professional references to:

Dr. Michael Seibert  
Solar Energy Research Institute  
Golden, CO 80401  
Tel.: (303) 231-1000

## Announcements

### IIIrd Greifswald Symposium on Light Therapy

October 4-7, 1989  
Trassenheide, G.D.R.

Contact: Dept. Paediatrics  
Ernst Moritz Arndt University  
Soldtmann-strasse 15  
Greifswald DDR-2200



### International Conference on Photodynamic Therapy

October 3-5, 1989  
Sofia, Bulgaria

Contact: Dr. M. Shopova  
Inst. of Organic Chemie  
Block 9  
Bulgarian Academy of Sciences  
Sofia 1113, Bulgaria

### Takashi Ito Retires Sends New Address

Former ASP Councilor and Associate Editor of P&P, Dr. Takashi Ito has written to inform us that his mailing address will be changing due to his retirement from the University of Tokyo. His new address is:

Takashi Ito  
Hagiya-cho 4-14-21  
Higashimurayama-shi  
Tokyo 189  
Japan  
Tel.: 0423-91-0719  
Fax: 0423-92-4341

### Third European Conference of the Spectroscopy of Biological Molecules

September 10-15, 1989  
Rimini, Italy

Contact: Prof. A. Bertoluzza  
Bologna  
Tel.: (051) 243119-259565  
FAX: 051-259456



### American Chemical Society 1989 National Meeting

September 10-15, 1989  
Miami Beach, FL

Contact: Meetings Department ACS  
1155 16th Street NW  
Washington, D.C. 20036  
Tel.: (202) 872-4396

### Secretariat willing and able to help!

The Secretariat wants to remind all ASP members that they are there to serve the membership. If you should have any problems relating to your membership, journal subscriptions, receipt of Society mailings, Newsletters, or P&P they stand ready and willing to help to resolve the matter as quickly as possible. The address and telephone number are listed on the front page banner of every Newsletter. Likewise questions about Society operations can be addressed to the Secretariat. If they don't have the answer, chances are they can direct you to the person who does.

**Newsletter Deadlines** – Newsletter deadlines are the first of the month before the issue date. Thus the deadline for material for the Dec/Jan issue will be 1 November.

## CALENDAR OF EVENTS

1989

- Sep 13-16 Regulation of Free Radical Reactions –  
Varna, Bulgaria [121]
- Sep 6-7 SPIE Advances in Photochemotherapy –  
Boston, MA
- Sep 10-15 Third European Conference on the  
Spectroscopy of Biological Molecules –  
Rimini, Italy [122]
- Sep 10-15 American Chemical Society National  
Meeting – Miami Beach, FL [122]
- Oct 1-4 DNA Damage and Repair in Human  
Tissues – Long Island, NY [121]
- Oct 3-5 International Conference on Photody-  
namic Therapy – Sofia, Bulgaria [122]
- Oct 4-7 Greifswald Symposium on Light  
Therapy – Trassenheide, G.D.R. [122]

- Nov 4-7 8th Congr. of the Internat. Soc. for  
Laser Surg. & Med. – Taiwan, R.O.C.  
[121]

1990

- July 1-15 NATO Advanced Study Institute on  
Photobiological Techniques – Kingston,  
Ontario, Canada
- July 17-21, '90 3rd Biennial Meeting, International  
Photodynamic Association – Buffalo,  
NY [121]

[ ]-Square brackets denote the Newsletter issue in  
which additional information may be found.

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### AMERICAN SOCIETY FOR PHOTOBIOLOGY

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