



# NEWSLETTER

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ASP - Newsletter



Paul Loach was installed as the 13th President of the American Society for Photobiology in New Orleans on June 26, 1985. He is a Professor of Biochemistry, Molecular Biology and Cell Biology at Northwestern University. Dr. Loach was trained as a biochemist with special interest in oxidative enzymes. He received his BS in Chemistry in 1957 from the University of Akron and his PhD in Biochemistry from Yale University in 1961. His thesis work, conducted under the direction of Henry Harbury, focussed on structure-function studies of cytochrome c. The methodology employed a combined electrochemical and spectroscopic study of heme peptides derived from this protein. The electrochemical techniques learned during this period continues to be an essential tool in many of his current studies. Dr. Loach's research involving photobiological systems began in his postdoctoral years with Melvin Calvin at the University of

California at Berkeley. There he applied the electrochemical methodology learned as a graduate student to characterization of primary photochemical events in photosynthesis. These studies, and his subsequent independent research at Northwestern, extended the electrochemical approach to *in vivo* measurements of midpoint potentials by systematic redox control experiments. This methodology has subsequently been widely used in the study of electron transport in biological systems. The postdoctoral training in Melvin Calvin's laboratory led to the systematic physical characterization of properties of the reaction center in bacterial photosynthesis which characterized Dr. Loach's early independent research at Northwestern University. Contributions to the field from this period include the establishment of a special bacteriochlorophyll as the primary electron donor and ubiquinone as the first stable electron acceptor in photosynthesis as carried out by purple bacteria. His laboratory was also the first to accurately determine the quantum yield for charge separation in the primary photochemistry as 0.95.

Another theme which is characteristic of Dr. Loach's research is the use of model complexes to learn more about *in vivo* systems. In his graduate studies, heme peptides were employed as models for cytochrome c. In his postdoctoral training, manganese pheophorbide a and manganese porphyrins were synthesized and studied to evaluate whether such protein-bound complexes played a role in oxygen evolution. Models currently being studied include covalently-linked porphyrin-quinone complexes, used to learn more about the reaction center of photosynthetic systems, and polymer-linked metalloporphyrins and quinones, used with liposome systems to examine mechanistic aspects of electron transport in and across lipid bilayers. Since the first covalently-linked porphyrin-quinone complex which was synthesized in Dr. Loach's laboratory and described in 1979, the synthesis and study of such complexes has become a very active field. The model work is carried out in parallel to physical probes of the *in vivo* systems as Dr. Loach believes that the two approaches are synergistic; that is, knowledge of the *in vivo* system is essential to the selection of appropriate models, and detailed information available from model systems allows new mechanistic insights into the behavior of *in vivo* systems and can suggest new *in vivo* measurements.

The major thrust of Dr. Loach's research now involves the traditional biochemical approach of taking the *in vivo* system apart, isolation and characterization of pure components, and eventually putting these systems back together (e.g., photosynthetic reaction centers, light-harvesting complexes, etc.). He believes this biochemical work nicely bridges the *in vivo* physical measurements and synthetic model studies. He feels the most promising recent results from his laboratory include a reversible dissociation of the light-harvesting complex of *rhodospirillum rubrum* into a subunit form, and the possible further reversible dissociation of these subunits into separated polypeptide and pigment components. A second very active biochemical area involves determination of the mechanism of control of cooperativity in light-utilization between photosynthetic units in the intact cell. Changes in the phosphorylation of proteins are being examined to evaluate whether such phenomena are part of the control mechanism.

Dr. Loach has published widely in the area of photosynthesis and metalloporphyrin chemistry and has organized numerous scientific meetings. In addition to planning the 1985 ASP Meeting in New Orleans, he planned the meeting "Primary Photochemistry of Photosynthesis" held at Argonne National Laboratory in 1971 and was selected as Chairman and organizer of the Gordon Research Conference on Physicochemical Aspects of Photosynthesis held in 1983. In connection with his research, Dr. Loach was awarded a USPHS Research Career Develop-

ment Award (1972-1977) and served as a member of the USPHS Biophysics and Physical Biochemistry Study Section A from 1978 to 1982. He was an Associate Editor of Photochemistry and Photobiology for 6 years and a member of the ASP Council for 3 years. At Northwestern, Dr. Loach teaches courses in bioenergetics, photosynthesis and photobiology. Eighteen students have received their PhD degree under his direction. He has served on and chaired a number of university committees and authored a comprehensive report on "Research, Teaching and University Goals."

Like our preceding President, Walt Shropshire, Paul Loach has a special interest in religion and has been an active member of the United Church of Christ, serving local churches as teacher, chairperson of Worship and Education Committees and of Council. He has three children and very recently has become a grandfather. For recreation, he enjoys bicycling, camping and trying to do his own experiments in the laboratory.

#### Editor's Mistake

Let's be frank about this. The Editor has made a serious error. Paul Loach is the current ASP President - term June '85 to June '86 - and should have been featured in the August-September Newsletter. Irene Kochevar is the President-Elect and will assume the office of President in June of '86. By mistake I leap-frogged over Paul and placed an article about Irene in the August-September Newsletter. This Newsletter attempts to partially rectify the situation by running the appropriate article for Paul. My apologies to Paul and Irene and the membership.

#### AWARDS

The Howard Isermann Award presented by the Society of Cosmetic Chemists -- The Society of Cosmetic Chemists announces the institution of the Howard Isermann Award. This award, which will be presented yearly at the Annual Meeting of the Society, will recognize the best manuscript submitted in English on any aspect of cosmetic science related to sunscreens, defined in its broadest context. The award carries an honorarium of \$1,000. To be eligible for consideration, papers should be submitted to the Society office (1995 Broadway, New York, NY 10023) by no later than April 30, 1986. A committee of experts in sunscreen research and in related areas will make the final determination.

#### 1986 R. H. Wright Award in Olfactory Research

Purpose: To recognize and encourage outstanding and ongoing achievement in research in olfaction.

Nature: The prize consists of (1) a scroll citing the contributions made by the recipient; (2) a \$5,000 cash award; (3) appointment as Distinguished Visiting Professor at Simon Fraser University; (4) a \$20,000 grant for research and to pay expenses for the visit to Simon Fraser University to receive the award and present lectures. Lectures will be published.

Establishment and Support: This annual award was established in 1984 by an anonymous donor in recognition of the accomplishments of Dr. Robert H. Wright.

Rules and Eligibility: The prize is awarded to an individual in recognition of an outstanding and ongoing achievement in research in olfaction. Emphasis will be given to recent work. Written work (either published or unpublished) will normally be the primary means of selection. The work must be written in or translated into English.

Nominations: The names of proposed candidates and supporting information (including descriptions of their contributions, literature references and biographical information) should be sent before 15 February 1986 to Professor B. P. Clayman, Simon Fraser University, Burnaby, British Columbia, V5A 1S6, CANADA.

#### NEED A ROOMMATE FOR THE ASP ANNUAL MEETING IN LOS ANGELES?

The Newsletter will provide a forum for requests for roommates at the Annual Meeting. This year the meeting is in Universal City, California, near Los Angeles, June 22 - 26, 1986. The Society continues to receive exceptional room rates at major hotels, especially for doubles, triples and quads. You, either scientist or student, may wish to advertise for a roommate. The Newsletter will run these ads in the April issue. They are due in the Editor's hands by February 22nd. Please make them brief, but remember to include your name, address, phone number, whether you require a non-smoker, etc. The ad that ran last year received a number of responses.

#### Directory

The Membership Directory is being updated for 1986. You will receive a request to check your listing. Please do so carefully and WITHIN THE TIME ALLOTTED. Some members' phone numbers have changed and need to be corrected. If you find other mistakes in the current (1984) Directory, please inform the Newsletter Editor immediately.

#### MEETING CALENDAR 1986

Feb. 2 - 6 HEALTH PHYSICS SOCIETY - Midyear Topical Meeting. Knoxville, Tennessee (Knoxville Convention Center). Further Information: HPS, Attn: Diane Taub, Executive Officer, SASC, 1340 Old Chain Bridge Road, Suite 300, McLean, VA 22101.

- Feb. 9 - 13 BIOPHYSICAL SOCIETY - 1986 Annual Meeting. To be held at the Brooks Hall/Civic Auditorium complex in downtown San Francisco. Contact: Biophysical Society Office, Emily M. Gray, Executive Assistant, 9650 Rockville Pike, Bethesda, Maryland 20814 - (301)493-6114.
- April 9 - 13 ENVIRONMENTAL MUTAGEN SOCIETY - Seventeenth Annual Scientific Meeting. 'Baltimore, Maryland (Sheraton Inner Harbor). Further Information: Diane Taub, Executive Officer, EMS, c/o SASC, 1340 Old Chain Bridge Road, Suite 300, McLean, VA 22101.
- April 12 - 17 RADIATION RESEARCH AND NORTH AMERICAN HYPERTHERMIA SOCIETY - The Riviera Hotel, Las Vegas, Nevada. Contact: Ms. Meg Keiser, Radiation Research Society, 925 Chestnut St., Philadelphia, PA 19107. (215)574-3153.
- June 8 - 12 AMERICAN SOCIETY OF PLANT PHYSIOLOGISTS - Louisiana State University, Baton Rouge, LA. For information contact: ASPP, 15501-A Monona Drive, Rockville, MD 20855. (301)251-0560.
- June 16 - 28 FEBS ADVANCED COURSE, BIOMEMBRANES AND DISEASES - Cluj-Napoca, Romania. Sponsored by the Cluj-Napoca Subcommittee of Biochemistry, Academy of the Socialist Republic of Romania, Cluj-Napoca Section (President Acad. Prof. Stefan Pascu). The course will consist of lectures and laboratory sessions. The lecture sessions will provide in-depth reviews of membrane structure and function in relation to human diseases. The practical work is designed to introduce young scientists to areas covered by the lectures. The participants will be selected on the basis of applications including a Curriculum Vitae and the relevance of the course for their future research. A letter of recommendation will be useful. Registration fee (lodging and meals not included): DM 300. Applications should be addressed before February 15, 1986 to: Gheorghe Benga, M.D., Ph.D., Department of Cell Biology, Faculty of Medicine I.M.F., Cluj-Napoca, 6 Pasteur St., 3400 Cluj-Napoca, Romania.
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- June 22 - 26 AMERICAN SOCIETY FOR PHOTOBIOLOGY - Fourteenth Annual Scientific Meeting. Los Angeles, California (Sheraton Universal). Further Information: Diane Taub, Executive Officer, ASP, 1340 Old Chain Bridge Road, Suite 300, McLean, VA 22101.
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- June 29 - July 3 HEALTH PHYSICS SOCIETY - Thirty-First Annual Meeting. Pittsburgh, Pennsylvania. Further Information: HPS, Attn: Diane Taub, Executive Officer, SASC, 1340 Old Chain Bridge Road, Suite 300, McLean, VA 22101.
- July 20 - 23 SOCIETY FOR FREE RADICAL RESEARCH - Third Biennial General Meeting. University of Dusseldorf, West Germany. Sessions will be: 1.) Radical Formation; DNA Damage; 2.) Singlet Oxygen; 3.) Reactive Aldehydes in Lipid Peroxidation; 4.) Radicals in Atmosphere; 5.) Radicals in Clinical Therapy. For information contact Dr. H. DeGroot, Institut fur Physiologische Chemie 1, Universitat Dusseldorf, Moorenstrabe 5, D-4000 Dusseldorf, West Germany.
- Aug. 10 - 15 VII INTERNATIONAL CONGRESS ON PHOTOSYNTHESIS - For further information contact: Congress Secretariat, Dr. J. Biggins, Division of Biology and Medicine, Brown University, Providence, Rhode Island 02912, Telephone - (401) 863-2426.
- Aug. 17 - 30 MEMBRANE RECEPTORS, DYNAMICS AND ENERGETICS - International Summer School. Island of Spetsai, Greece. Lectures, discussions and posters on new developments and methods in membrane receptor research, transport processes and energy transduction. Topics will include: the organization of lipids and proteins in membranes; organization and function of membrane receptors; transmembrane signalling; proton conduction, ion pumps and energy conversion; specialized cellular organelles. For information contact: Professor K. W. A. Wirtz, State University of Utrecht, Laboratory of Biochemistry, P. O. Box 80.054, NL-3508 TB Utrecht, The Netherlands.
- Aug. 11 - 20 XXII INTERNATIONAL HORTICULTURAL CONGRESS - The International Society for Horticultural Science, the American Society of Horticultural Science and the American Horticultural Society invite all scientists engaged in horticultural research, teaching, and public service to attend the XXII International Horticultural Congress (IHC) in Davis, California, USA. Abstracts of all invited and contributed papers (oral and poster presentations) and program details will be published in a special section of HortScience in June 1986 and will be mailed to all those who register for the Congress. Contact: XXII IHC (General). Congress Secretariat, Attn: Carolyn Norlyn, Campus Events and Information Office, University of California, Davis, CA 95616, USA.
- Oct. 27 - 31 7th EUROPEAN PHOTOVOLTAIC SOLAR ENERGY CONFERENCE - University Sevilla, Spain. For information contact: Dr. G. Grassi, Conference Secretary, Commission of the European Communities, DG XII, Rue de la Loi 200, B - 1049 Brussels, Belgium.

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July 24 - Aug. 1 XIV INTERNATIONAL BOTANICAL CONGRESS - Berlin, West Germany. Correspondence concerning general matters of the Congress should be addressed to the Congress Secretariat, XIV International Botanical Congress, Konigin-Luise-Strasse 6-8, D-1000, Berlin (West) 33.

Aug. 23 - 29 9th INTERNATIONAL BIOPHYSICS CONGRESS - For information contact: Secretariat, Mrs. Ruth Goldstein, The Aharon Katzir-Katchalsky Center, The Weizmann Institute of Science, Rehovot, 76100, Israel. Tel: (08)-482148; (08)-474425; Telex: 361900.

FUTURE ASP MEETING SITES

1987

Bal Harbour, Florida, in June

1988

Bro<sup>a</sup>dmoor, Colorado Springs, Colorado, in March (International Congress this year in Israel)

1989

Somewhere in the Northeast in June

1990

Vancouver, British Columbia, Canada

**AMERICAN SOCIETY FOR PHOTOBIOLOGY**

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