AMERICAN SOCIETY FOR PHOTOBIOLOGY
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NEWSLETTER

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ASP - Newsletter

From the American Academy of Dermatology

The Task Force on Photobiology of the American Academy of Dermatology presents the following position of "caution" concerning exposure of the skin to long wavelength ultraviolet radiation, commonly referred to as UVA (320-400 nm). This radiation is now being used increasingly in "tanning salons" in this country as well as in other parts of the world. In the late 1970's the first "tanning" units utilized the UVB or sunburn-producing wavelengths (290-320 nm). However, the known erythemogenic, carcinogenic, ophthalmologic, and aging effects of the UVB led concerned dermatologists in the United States to strongly admonish the public about the hazards of indiscriminate and uncontrolled exposure of the skin for the purpose of acquiring a suntan. Within the past two years these cabinets have apparently been supplanted by the "UVA" salon, presumably because there is the notion that UVA radiation is somehow "safer". Unfortunately, this degree of presumed safety may well be erroneous since it is now known that these wavelengths can produce several untoward effects, including the following:

1. UVA can cause damage to the unprotected lens of the eye, resulting in the formation of cataracts.
2. UVA can accentuate the acute damage to the skin induced by UVB rays, i.e. it will exaggerate a UVB sunburn and concomitant injury to cells in the skin.
3. Experimental evidence indicates that UVA can augment the cancer-producing effects of UVB rays. (It should be noted that many of these UVA tanning units emit small amounts of UVB which may be as high as 2-3% of the total emitted energy).
4. Experimental evidence indicates that UVA radiation alone can cause erythema and skin cancers in laboratory animals.
5. UVA radiation is responsible for the vast majority of sun-induced reactions to exogenous chemicals (medicines, perfumes and the like) and can evoke both phototoxic and photoallergic responses.
6. UVA radiation has been shown to cause changes in the blood vessels in the skin.
7. UVA radiation is a potent stimulator of melanogenesis which is a regular response of the pigment-producing cell known as the melanocyte to injury.

In addition, some of the advertising claims for these salons are misleading. There is no scientifically acceptable evidence that UVA radiation stimulates metabolism, increases oxygen uptake by the blood, increases efficiency of respiration, increases the performance of muscles, increases resistance to infection and improves or cures any skin disease, e.g. clearing of acne. In addition, in contrast to the statement that a little bit of UVB is needed to initiate a tan, large doses of UVA (1000-fold higher than UVB) are needed to produce a visible tan.

The greater penetrability of UVA radiation into the dermis makes it highly likely that these wavelengths play a role in the aging changes seen in this skin compartment. Ironically, it is those individuals of fairest complexion who are genetically least capable of tanning who will likely suffer the most sever damage from such exposures. This is because very light-skinned people cannot achieve substantial darkening of the skin by exposure to ultraviolet radiation. They may, therefore, be repeatedly exposed and yet achieve little or no tanning by visiting these units.

Therefore, it is the opinion of the Task Force on Photobiology that the concept of suntanning for a suntan's sake, even with UVA rays, is potentially hazardous. Until additional scientific information is available, such treatments should not be undertaken without a full understanding of the possible risks involved which may well outweigh any benefits to be derived from these exposures.

The ASP Council is working on an American Society for Photobiology statement that will appear in a future issue of this Newsletter.

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NOMINATIONS FOR ASP/SIGMA XI NATIONAL LECTURER IN PHOTOBIOLOGY

The ASP Council has approved, for a two-year trial period, the establishment of a joint lectureship with Sigma Xi. The Grants Committee solicits volunteers and nominations, directed to the chairman of the Committee, for the 1985 Lecturer. His or her duties will be to accept a limited number of invitations (perhaps 5 to 10) before local sections of Sigma Xi nationwide. The Lecturer will agree to limit honoraria to $150.-per lecture, together with a full payment of travel costs and subsistence. Needless to say, we are looking for outstanding photobiologists, in the widest sense, who have proven that they can present lectures on their field of research in an unusually interesting manner. Please direct correspondence to:

Bodo Diehn
Chairman ASP Grants Committee
Michigan Research Corporation
2200 Bonisteel Boulevard
Ann Arbor, MI 48109

POSITIONS OPEN

Postdoctoral Position in Photosynthesis Research at Brown University

Funds are expected to be available in October 1983 for an award period of two-years for a Postdoctoral Research Fellowship in photosynthesis research. The research area is in the mechanism of energy distribution between the two photosystems as brought about by the light-state transition. Our work is presently concerned with an elucidation of the biochemical mechanism of this regulatory process in the phycobiliprotein-containing algae and cyanobacteria.

The candidate should have a Ph.D. with a solid background in photosynthesis and experience in protein chemistry, membrane biochemistry and the technology of photobiology. Interested candidates should forward a resume of profesional experience and the names and addresses of three references to Dr. John Biggins, Division of Biology and Medicine, Brown University, Providence, Rhode Island 02912. Brown University is an Equal Opportunity/Affirmative Action Employer.

Staff Position - Carnegie Institution of Washington

The Department of Plant Biology, Carnegie Institution of Washington is invitating applications for a staff position, to join a group studying physiological plant ecology, plant adaptation, and stress physiology, with an emphasis on interdisciplinary approaches - physiological, biochemical, molecular, genetic. The appointment may be made at a junior or senior level, though a more junior appointment is preferred. Applicants should have at least two years of postdoctoral experience. Applicants should send their curriculum vitae, the names and addresses of three references familiar with their current research, and a brief paragraph on their future research objectives, to Dr. Winslow R. Briggs, Director, Department of Plant Biology, Carnegie Institution of Washington, 290 Panama St., Stanford, CA, 94305. Application deadline is Sept. 30, 1983.

COURSE

Nov. 7-9 Course on "Polymers For Electronic Applications".
Site: Lake Mohonk Mountain House, New Platz, New York.
Contact: Dr. A.V. Patsis, Chemistry Department, CSB 209, State University of New York, New Paltz, New York 12561. Tel: (914)257-2175.

BOOK

Solar Radiation Data - Series F, Volume 2 - This book gives a comprehensive overview of activities currently underway to produce, collect and compile radiation data as needed for the various types of solar energy applications in Europe. The present book contains many interesting new results from the European solar energy community.
EUR8333 EN ISBN90-277-1566-1
pp. xii + 305
price: Hfl. 105
Order from: D. Reidel Publishing Company, P.O. Box 17, 3300 AA Dordrecht (NL)

MEETING

May 24-29, 1984. AAAS Annual meeting. The New York Hilton and the Sheraton Centre New York. For information write: AAAS Meetings Dept., 10th floor, 1101 Vermont Ave., NW, Washington, D.C. 20005

EDUCATION COMMITTEE

This committee urges members to submit to them their ideas, opinions and experiences concerning education in photobiology. Topics include: textbooks, video tapes, course syllabi, etc. In particular:

1) Experiments in photobiology: Please send copies of any experiments which involve UV or visible radiation effects on biological systems or on chemical reactions of biologically relevant molecules. If the experiments were not perfect, suggest modifications. If you have ideas for experiments, send them also. Perhaps we can obtain funds to develop experiments.

2) Reading lists: Please send lists of review articles or significant papers in your field or from courses which have included photobiological topics. Annotation of the lists with respect to their use in teaching will be helpful.

Please send materials to the chairperson of the ASP Education Committee:

Dr. Barbara Zilinskas
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