



Fairmont Chateau Frontenac, situated on top of the Cap Diamant Cliffs, in the heart of Quebec City.

American Society for Photobiology 30th Annual Meeting

July 13-17, 2002

Fairmont Chateau Frontenac
Quebec City, Canada

Scientific Program Chair: **Woody Hastings**

Highlights of the Program

Welcome and Keynote Lecture: 5:30 PM Saturday
Non-visual responses of vertebrates to visible light; the evolution of a neglected sensory modality - Michael Menaker - ASP Lifetime Achievement Awardee

Opening Reception: 7 PM Saturday

Menaker Reception and Dinner:
7 PM Sunday - Gene Block, MC

President's Lecture: 1:30 PM Monday
Microbial Rhodopsins: Genome-mining and Structure/Function Relationships in Transport and Signal Transduction - John Spudich

President's Reception and 30th Annual Business Meeting: 5:30 PM Monday

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Refreshments and conversation with a call to order of the annual members' meeting at 6 PM

ASP 30th Anniversary Reception and Banquet:
7 PM Tuesday

Award Lectures

ASP Research Award:
1:30 PM Sunday - Masaki Furuya

New Investigator Award:
1:00 PM Tuesday - Toshiyuki Okano and Oded Beja

School Lectures and Speakers

The Digital Photobiology Compendium:
The Future of Teaching and Learning
8-9 AM Sunday - Dennis Valenzeno

Biophotonics: What's that?
8-9 AM Monday - Gerard Marriott

Light-induced reactions in photosynthesis
8-9 AM Tuesday - Bridgette A. Barry

The Determination of Immune Protection Factors of Sunscreens

8-9 AM Wednesday - Antony Young and Anny Fourtanier

Publish or Perish: Photochemistry and Photobiology policies, procedures and plans:

5:30 PM Sunday

Photochemistry and Photobiology editor Tito Scaiano and Associate Editors will entertain an open forum to answer questions about *Photochem Photobiol*, ranging from editorial policy and refereeing procedures to on-line publishing and plans for the future. A new Editor-in-Chief is to be appointed in January 2004, so come with suggestions for that position.

Grantsmanship Lecture:

5:30 PM Tuesday

So you want to be an NIH Grantee - Paul Strudler

Symposia and Organizers

4 parallel sessions, each a half day; AM sessions, odd numbers, 9-12 AM; PM sessions, even numbers, 2:30-5:30 PM. Grouped sessions are sequential in the order given.

Session A

A1 Interaction of Climate Change and Ozone Depletion - Drusilla Hufford

A2 Phototherapy and Photoprotection - Henry Lim

A3 Photoimmunology -

Paul Bergstresser and Margaret Kripke

A4 Platform Session TBA

A5 Photocarcinogenesis - Hasan Mukhtar

A6 UV Effects in the Aquatic Environment -

Patrick Neale and Warwick Vincent

A7 Photobiology of Melanogenesis -

Zalfa Abdel-Malek

Session B

B1 Death Mechanisms Associated with PDT:

Apoptosis - David Kessel and Nancy Oleinick

B2 PDT: Vascular and Clinical Effects -

Tayyaba Hasan and Chuck Gomer

B3 PDT: Oxidative Interactions -

Giulio Jori and Albert Girotti

B4 ALA-Mediated PDT - Roy Pottier and Johan Moan

B5 PDT-Elicited Immune Responses -

Barbara W. Henderson and Mladen Korbelik

B6 Phototoxicity Mechanisms: Cellular and

Molecular Approaches - Pascale Reinhardt and

Don Forbes

B7 Regulatory Phototoxicology -

Doug Learn and Chris Sambuco

Session C

C1 Photoproduct Formation and Distribution, Repair and Mutagenesis - Regen Drouin and Evelyne Sage

C2 Inducible Cellular Responses and DNA Repair -

Andrew Rainbow and Gerald P Holmquist

C3 DNA Repair: Cellular Signaling and Tumour

Suppressors - Elliot A. Drobetsky and Alain Sarasin

C4 DNA Repair Enzymology -

Darel Hunting and Eric Moon-Shong Tang

C5 Platform Session

C6 UV-Induced Cell Death -

Girish Shah and Douglas E. Brash

C7 Skin Cancer Epidemiology -

Marc Rhainds and Richard Gallagher

Session D

D1 Circadian Photoreception and Transduction -

Ignacio Provencio and David Berson

D2 Phototransduction in the Human Circadian

System - Charles Czeisler and George Brainard

D3 Platform Session - TBA

D4 Blue light receptors in plants and bacteria -

Wolfgang Gärtner

D5 Photo-Control in Biological Systems -

Bulent Mutus

D6 Molecular Sensors in Photobiology -

David Lawrence

D7 Getting Excited by Bioluminescence:

Photosynthesis in Reverse - E. A Meighen and Shiao-Chun (David) Tu

Poster and Platform Sessions

Two Poster sessions will be arranged from submitted abstracts. Some proffered abstracts will be selected and scheduled for oral delivery with appropriate symposia. Other sessions will be scheduled as needed.

Poster Session I: Authors to be present *Sunday 5:30 – 7 PM*. Posters to be setup on Saturday afternoon or evening and taken down on Monday by noon.

Poster Session II: Authors to be present *Tuesday 5:30 – 7 PM*. Posters to be setup on Monday afternoon and taken down Tuesday evening.

ASP News

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Abstract Deadline: April 1, 2002

Abstract submission and registration on line via the ASP web site <http://www.Photobiology.org>. A meeting registration by the same date will be required for an abstract to be accepted.

Late Breaking Abstracts Deadline: July 1, 2002

Abstracts submitted between March 26 and July 1 by registered delegates will be presented in the "Works in Progress" poster session. Submit on-line via the ASP web site. <http://www.Photobiology.org>.

Rules for Abstract Submission

A member of the Society (Regular or Associate) may submit only one contributed abstract for which an oral presentation is requested. Members may co-author additional abstracts for oral presentation which other members are presenting or sponsoring. Contributed abstracts for poster sessions are not limited. The same rules apply to non members, but their submissions must be sponsored by a member of ASP. Each abstract should be submitted separately.

Invited speakers for symposia sessions are asked to submit abstracts of their presentations, following the instructions on the web site, indicating the session in which it will be, e.g., B4 or D2, etc., as listed in the Preliminary Program. Such abstracts do not need to be sponsored, and do not count towards the limitation on contributed abstracts. Invited speakers may thus contribute an additional abstract for oral presentation and unlimited abstracts for poster presentation.

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Council and Other Activities

Saturday: 10 AM - 4:30 PM - 85th Council meeting
Sunday: 12 - 1:30 PM - Mentoring luncheon (by invitation)
Sunday: 6:30 PM *Photochem Photobiol* Board meeting and dinner (J.C. Scaiano)
Monday: 12 - 1:30 PM - Past Presidents' Luncheon
Wednesday: 12 - 4 PM - 86th Council meeting



Letter From the Editor

Peter A. Ensminger

This month's newsletter features an article on full spectrum lighting by Dr. Jennifer Veitch of the National Research Council of Canada. While consumers are being deluged with questionable claims for the health benefits of full spectrum lighting, Dr. Veitch and colleagues have shown that there is little or no evidence that full-spectrum lighting provides a benefit.

Surely no one has made more incredible claims for full spectrum lighting than Dinshah P. Ghadiali (1877-1966), whose inventions were featured at the Bob McCoy's Museum of Questionable Medical Devices (now part of the Science Museum of Minnesota in Minneapolis). Ghadiali developed the field of "Spectro-Chrome Therapy", which required patients to lay down naked and facing north so that "attuned color waves" could be applied to the bare skin. According to Ghadiali, green light is a pituitary stimulant, germicide, and muscle tissue builder; yellow light is a digestant, anthelmintic, and nerve builder. Red, violet, blue, turquoise, lemon, orange, scarlet, magenta, and purple lights also had their specific benefits. By 1940, Ghadiali had made over \$1 million selling his "Spectro-Chromes". Believe it or not, Ghadiali's ideas are still being promoted and are even being taught at an American university, which offers a course on Chromotherapy, where students "learn treatments of various illnesses with the use of colored light".

The next issue of *ASP News* will feature an article about the marketing plans of Courtesy Associates for the ASP. Courtesy Associates will be implementing plans to grow the ASP by 30% over the next three years in terms of member recruitment and retention, attendance at the annual meeting, and profitability. An important part of their plans is promotion of the annual meeting. Thus, I thus urge you all to read Woody Hasting's Preliminary Program for the upcoming ASP meeting in Quebec City. This will surely be an exciting meeting in one of the most beautiful cities of North America.



The "Spectro-Chrome Cabinet" for home use, developed by Dinshah P. Ghadiali who listed his credentials as "(Honorary) M.D., M.E., D.C., Ph.D., LL.D., N.D., D.Opt., F.F.S., D.H.T., D.M.T., D.S.T., Etc."
Reproduced with permission of Bob McCoy, <http://www.mtn.org/quack>.

Current ASP Officers

President: John L. Spudich, Div. 2 (Photosensory Biology)

President-Elect: Henry W. Lim, Div. 4 (Photomedicine)

Past President: J. Woodland Hastings, Div. 2 (Photosensory Biology)

Secretary: Helene Hill, Div. 5 (Environmental Photobiology and UV Effects)

Treasurer: Daniel B. Yarosh, Div. 5 (Environmental Photobiology and UV Effects)

Photochem Photobiol Editor: J. C. Scaiano, Div. 1 (Photochemistry, Photophysics and Phototechnology)

Newsletter Editor: Peter A. Ensminger, Div. 2 (Photosensory Biology)

Executive Secretary: Kelly Gillespie

Current ASP Councilors and Term Expirations

Steven J. Britz, Div. 2 (Photosensory Biology) - 2002

Dianne Godar, Div. 4 (Photomedicine) - 2002

Lisa Kelly, Div. 1 (Photochemistry, Photophysics and Phototechnology) - 2002

Marianne Krieg-Kowald, Div. 4 (Photomedicine) - 2002

Katthryn W. Woodburn, Div. 4 (Photomedicine) - 2002

Paola Taroni, Div. 4 (Photomedicine) - 2003

Frances P. Noonan, Div. 4 (Photomedicine) - 2003

Masakatsu Watanabe, Div. 2 (Photosensory Biology) - 2003

Candidates for President-Elect (vote for one)



John D. Simon

ASP Division 1 (Photochemistry, Photophysics and Phototechnology) Departments of Chemistry and Biochemistry, Duke University and Medical Center, Durham, NC.

Education: A.B., 1979, Chemistry, Williams College; Ph.D., 1983, Chemistry, Harvard University; postdoctoral studies, 1983-1985, Department of Chemistry and Biochemistry, University of California, Los Angeles.

Appointments: 1985-1997, Assistant, Associate, and Full Professor, Department of Chemistry and Biochemistry, University of California, San Diego; 1998-present, George B. Geller Professor, Department of Chemistry, Duke University, Durham; 1999 – present, Professor, Department of Biochemistry, Duke University

Medical Center; 2000 – present, Research Professor, Department of Ophthalmology, Duke University Medical Center; currently Chemistry Department Chairman

Research Interests: Molecular structure and function of melanins, molecular composition and photoreactivity of human ocular lipofuscin, photochemical approaches for determining the binding of mycotoxins to human plasma proteins, ultrafast spectroscopy, electron transfer, AFM imaging.

ASP Service: Regular attendee and speaker at national and international photobiology meetings.

Candidate's statement: I am honored to be considered for this important position. The ASP is a special society. One of our greatest strengths is that we offer a home for both basic and clinical researchers. We are at a time in the scientific endeavors where there is a great emphasis on translating the results from basic research into the clinical domain. The membership of the ASP has made and is well positioned to continue to make fundamental and important contributions to this area. To make the greatest impact requires the society remain healthy and that it work to broadly educate scientists and the public about its accomplishments and potential. It is these goals to which I would devote my efforts.

The health of our society is measured by its leadership, its membership, our collective intellectual activity, the quality of our published works, and our financial foundation. I know from my own reprint requests that there are still many places in the world that do not have routine access to Photochemistry and Photobiology. While the quality of our journal is high, we need to work to

more broadly disseminate its content. Recruiting young scientists must remain an important focus of our efforts and it is important to provide the youth of our society with the opportunity to participate in meaningful ways at our national and international meetings and on our committees. It is equally important to try to attract established scientists to our field. Our ultimate success as a society should be partially measured by our ability to attract bright and creative minds to work on photobiological problems. This presents a unique challenge to us because these topics are not routinely taught in most graduate training programs. Success here requires sustaining an active and effective Council, furthering outreach efforts, creating mechanisms (e.g., workshops) whereby young scientists can find out what we do, and encouraging Program Chairs to broaden the scope of topics presented at our national meetings. We all know there are tremendous research opportunities in both the basic and clinical arenas; we need to communicate this message. The membership of ASP offers a unique opportunity to connect basic science to clinical applications, and we as a society should be constantly working to make this type of scientific interaction common.

As President, I would also devote significant energy towards increasing the general awareness of photobiology. Issues such as skin cancer, photoaging, drug phototoxicity, PDT, are commonly in the news but rarely is our society highlighted in the public press as a group of dedicated scientists working to understand and advance the knowledge in these areas. It is important to foster strong media connections and to educate journalist in an effort to enhance the public knowledge of our society.



Thomas A. Moore

ASP Division 3 (Photosynthesis and Photoconversion)
Departments of Chemistry and Biochemistry, Arizona State University, Tempe, AZ.

Education: B.A. and Ph.D. in chemistry from Texas Tech University; undergraduate and graduate work under the direction of Professor Pill-Soon Song; Postdoctoral work at the University of Washington under the direction of Professor Alvin Kwiram.

Appointments: Assistant, Associate and Professor, Department of Chemistry and Biochemistry at Arizona State University, 1976 to present; Visiting appointments at the Centre d'Etudes Nucléaires de Saclay, Departement Biologie, Service Biophysique, Gif-sur-Yvette, France, 1982-1983, 1984, 1987, and at the Laboratoire de Physico-Chimie des Systèmes Polyphases, in Montpellier, France, 1984, 1986, 1987, 1988; Chercheur Associé au CNRS 1985.

Research Interests: Team member in a collaborative research effort with Professors Ana Moore and Devens Gust aimed at the design and synthesis of artificial photosynthetic antennas and reaction centers and the assembly of artificial photosynthetic membranes using these components.

ASP Service: Council member in the early eighties and associate editor of Photochemistry and Photobiology since 1997.

Candidate's Statement: In my view, the primary responsibility of the President is to work with the members and council to invest the Society's intellectual and fiscal resources in ways that enhance the value of the Society to its members. By providing a valuable experience for its members, the Society will grow and prosper. In broad terms, our value comprises our annual meetings, our journal and our outreach programs. I would work with the membership and council to find ways to deal with the perennial issue of how to encourage and facilitate attendance at the annual meetings by young scientists. My feeling is that our annual meeting is the forum for showcasing our activities and thereby attracting new members. Towards this end we must commit even more funds to support travel and symposia organized by young investigators. As photobiology expands, we need to be on the lookout for discoveries by scientists outside of our traditional areas and be sure to include them in our meetings. Turning to the journal, the current editor has set a high mark for editorship and we should look to build from that level. Our expectations for excellence may require increases in operational support and the editor's stipend. Among our outreach programs, I am impressed by the educational programs some of our members have initiated and recommend that the Society increase its support of those efforts. Also, we need to work harder to be ready with expert information on issues where photobiologists can be a resource for policy decisions at local, state and federal levels. Increased visibility will be good for the Society and the expert advice our members can give will be good for the larger society. In short, my position is that investing our fiscal resources in programs that build the Society will be, in the long term, better for us than amassing large reserves.

Candidates for Secretary

(vote for one)

Helene Z. Hill

Division 5 (Environmental Photobiology and UV Effects) Department of Radiology, New Jersey Medical School, Newark, NJ.

Education: A.B., 1950, Smith College; Ph.D., 1964, Brandeis University; Post-doctoral research, 1964-66, Harvard Medical School; Post-doctoral research, 1966-67, University of Colorado Medical Center; sabbaticals at Brookhaven, Argonne National Laboratories and University of Pennsylvania, Department of Radiation Oncology.

Appointments: Professor, Departments of Radiology, Microbiology and Molecular Genetics, Biochemistry and Molecular Biology, New Jersey Medical School; Associate Professor, 1976-81, Department of Biochemistry, Marshall University Medical School; Associate Professor, 1973-76 Section of Cancer Biology, Division of Radiation Therapy, Washington University, St. Louis; Assistant Professor, 1967-72, Department of Biophysics and Genetics, University of Colorado Medical Center.

Research Interests: Bystander effect in radiation; role of intercellular communication in cellular responses to stress.

ASP Service: Councilor, 1994-97; Council Secretary, 1999-2002; organized symposia and chaired platform sessions at national meetings; helped organize the Forum for Women and Minorities (now the Mentoring Committee).

Candidate's Statement: Like the electromagnetic spectrum, the strength of our Society lies in our unity and diversity. We are small enough to be friendly and large enough to have an impact. We must be continually vigilant to include members from all backgrounds with respect to discipline, age, ethnicity, and gender in the leadership of the Society. Most importantly, we should persist in helping and encouraging fledgling photoscientists to participate in all facets of the Society's activities. In order to attract new scientists to our field, we need to reach out to schools, colleges, and universities and to other societies with related interests. We must maintain the interest of our membership by encouraging our divisions to publish articles in our journal and make presentations at national meetings that will attract broad audiences. As Secretary for the last three years, I have come to know and respect the current and past leaders of the Society and to admire their dedication and skill. We have been extremely lucky to have such talented people to guide us. It has been a pleasure to serve with the Executive Committee and the Council. I will be happy to serve for another term, but will be equally happy to pass the pen along to a successor.

Lisa Kelly

Division 1 (Photochemistry, Photophysics and Phototechnology)

Department of Chemistry and Biochemistry, University of Maryland, Baltimore County, Baltimore, MD.

Education: Department of Energy Distinguished Post-Doctoral Fellow, 1994 – 1996, Biology Department and National Synchrotron Light Source, Brookhaven National Laboratory; Ph.D., 1989-1993, Center for Photochemical Sciences, Bowling Green State University; M.S., 1988-1989, Department of Chemistry, University of Rochester; B.S., 1988, State University of New York at Geneseo.

Appointments: Assistant Professor, 1996-present, Department of Chemistry and Biochemistry, University of Maryland, Baltimore County.

Research Interests: Mechanisms of photoinduced damage in biological systems using steady-state and time-resolved optical spectroscopies; synthetic design and photoactivation of artificial nucleases and proteases.

ASP Service: Member since 1991; Member of Council and Division I representative, 1999-present; Symposium organizer, speaker, and regular attendee at Annual Meetings.

Candidate's Statement: As a current Council Member, I feel that I have learned a great deal about the Society's operation and mission. I wish to continue to play an active role in the Society as ASP Secretary. As a Council Member, I have contributed to the ASP mission in three important ways: (i) to support my strong belief in recruiting and mentoring young members from a diversity of disciplines, I have been an active participant in the mentoring luncheon and encouraged involvement of young photobiologists; (ii) I have supported ASP's cause to educate science students and the general public through service as Chair and Member of the Education/Public Relations Committee; (iii) more recently, as Chair of the Membership Committee, I have worked closely with Courtesy Associates to assess and survey our membership to streamline the application process and identify how the Society can better serve its membership. In summary, I look forward to the opportunity to participate in a continued effort of these and other important missions as an officer of the ASP.

Candidates for Councilor

(vote for five)

Linda Chalker-Scott

Division 5 (Environmental Photobiology and UV Effects)
Center for Urban Horticulture, University of Washington.

Education: Ph.D., 1988, Horticulture (double minor in Biochemistry and Botany), Oregon State University (Thesis title: *Relationships between Endogenous Phenolic Compounds of Rhododendron Tissues and Organs and Cold Hardiness Development*); M.S., 1981, Biological Sciences, Oregon State University (Thesis title: *Sensitivity of the Marine Copepod Tigriopus californicus to Ultraviolet-B (290-320 nm) Radiation*); B.S., 1978, Biological Sciences, Oregon State University.

Appointments: September 2000-present: Program Director, Sustainable Community Landscapes, Center for Urban Horticulture, University of Washington; August 1997 - present: Associate Professor, Plant Stress Physiology, Center for Urban Horticulture, University of Washington; September 1995 - August 1997: Associate Professor, Plant Physiology, Department of Biology, SUNY College at Buffalo; September 1989 - August 1995: Assistant Professor, SUNY College at Buffalo.

Research Interests: Areas of interest include environmental stress physiology (especially cold and UV-B) and ecophysiology of plants in human-altered landscapes. Recently interested in the environmental significance of anthocyanins.

ASP Service: Originally a member in 1980; rejoined again in 1991. Row editor (environmental photobiology) for Digital Photobiology Compendium (D. Valezno, ed.). Co-chaired symposium at 13th International Congress on Photobiology, San Francisco, CA, July 2000. Solar UV radiation effects of plants: Interactions with abiotic and biotic stress factors.

Candidate's Statement: I first joined ASP in 1980 as I was finishing my Master's degree in marine photobiology. Although I have since switched from animal to plant systems, I remain interested in the effects of light on life. Furthermore, of all the professional groups I've belonged to, I have found ASP to be the most open and responsive to members of diverse interests. As a whole plant physiologist, I am especially interested in strengthening the environmental photobiology component of ASP.

Herbert Hönigsmann

Division 4 (Photomedicine)
Division of Special and Environmental Dermatology, Department of Dermatology, University of Vienna Medical School, Vienna, Austria.

Education: M.D., 1968, University of Vienna, Medical School; Research Fellow, 1968-69, Institute of Cancer Research, University of Vienna; Residency in Dermatology, 1969-72, Department of Dermatology I., University of Vienna.

Appointments: 1973-1976, Research Associate, Department of Dermatology I., University of Vienna; 1977-81, Associate Professor of Dermatology, University of Innsbruck, Austria; 1978, Visiting Scientist, Department of Dermatology, University of Washington, Seattle; 1979, Visiting Professor, Department of Dermatology, Harvard Medical School, Boston; 1981-83, Associate Professor of Dermatology, Chief Photobiology Unit, Department of Dermatology I., University of Vienna; 1983-92 Professor of Dermatology and Vice-chairman, Department of Dermatology I., University of Vienna; 1992-present, Professor of Dermatology and Chairman, Division of Special and Environmental Dermatology, University of Vienna, Austria.

Research Interests: Clinical Photomedicine (Photodermatoses, photoallergy, photoprotection, photocarcinogenesis), phototherapy, photodynamic therapy, extracorporeal photopheresis.

ASP Service: Member since 1976; regular attendee, speaker at annual meetings; organizer of the 12th International Congress on Photobiology, Vienna 1996; President of the International Union of Photobiology (IUPB, formerly Association Internationale de Photobiologie) 2000-2004; President of the European Society for Photobiology 1989-1991.

Candidate's Statement: My aims as Councilor would be to serve as link to international photobiology and to the ESP, in particular during my office as president of IUPB; being in the committee for the 14th ICP in Korea 2004, I could contribute in delineating the role of ASP in this congress. I would also like to deepen the cooperation between basic photobiologists and clinicians interested in photomedicine, as this seems to be an area that can be considerably improved.

Wouter D. Hoff

Division 2 (Photosensory Biology)
Department of Biochemistry and Molecular Biology,
University of Chicago.

Education: B.S., 1991, Biology (with High Honors), University of Amsterdam; Ph.D., 1995, Biology (with High Honors), University of Amsterdam; Damon-Runyon post-doctoral fellow, 1995-97, University of Texas; Damon-Runyon post-doctoral fellow, 1997-1998, Oklahoma State University.

Appointments: Assistant Professor, Department of Biochemistry and Molecular Biology, The University of Chicago, 1998-present.

Research Interests: Bacterial photoreceptors and their signal transduction chains; using photoreceptors as model systems for signal transduction, protein function, and protein folding; biophysics of proteins; development of sensors with medical applications based on light-sensitive proteins.

ASP Service: None.

Candidate's Statement: As an undergraduate student at the University of Amsterdam I became interested in bacterial photoreceptors, and this has remained the focus throughout my work. After a Ph.D. on photoactive yellow protein (PYP) from purple bacteria under the supervision of Klaas Hellingerwerf at the University of Amsterdam, and post-doctoral work with John Spudich at the University of Texas and Aihua Xie at Oklahoma state University involving both PYP and the archaeobacterial sensory rhodopsins, I started my own research group at the University of Chicago in 1998. In Chicago I continue to follow my long-standing interest in using photoreceptors as model systems to unravel protein function, signal transduction and protein folding.

Photobiology is in a very exciting stage. First, a number of novel photosensory proteins have been discovered, and key results have recently been obtained for other bacterial photoreceptors, in particular the crystal structure of sensory rhodopsin II. Secondly, using powerful techniques such as X-ray crystallography and FTIR spectroscopy, complemented by molecular genetics and genomics-based approaches, it is becoming increasingly feasible to aim for a deep understanding of signaling by bacterial photoreceptors at the molecular level. As a council member I will emphasize these exciting new developments in photobiology, and will aim to strengthen the efforts of the Society in these areas.

Guilherme L. Indig

Division 1 (Photochemistry, Photophysics and hototechnology)

Department of Pharmaceutical Sciences, University of Wisconsin, Madison, WI.

Education: Ph.D., 1989, Institute of Chemistry, University of São Paulo, Brazil; DAAD Fellow, 1986, Department of Physiological Chemistry, University of Düsseldorf, Germany; B.Sc., 1979, Department of Chemistry, State University of Campinas, Brazil.

Appointments: Assistant Professor, 1995-present, Department of Pharmaceutical Sciences, University of Wisconsin, Madison; Post-doctoral Research Associate, 1992-1994, Department of Chemistry, Boston University; Post-doctoral Research Associate/Fellow, 1989-1991, Department of Chemistry and Department of Molecular and Cellular Biology, Harvard University; Community College Teacher, 1983-1985, São Paulo, Brazil; High School Teacher, 1977-1982, São Paulo, Brazil.

Research Interests: Subcellular targeting in photodynamic therapy; oxygen-independent mechanisms of photosensitized cell destruction; natural product photosensitizers; photostability of drugs and drug formulations.

ASP Service: Member since 1996; has contributed to *Photochemistry and Photobiology* both as author and reviewer, regular attendee and speaker at ASP annual meetings.

Candidate's Statement: I believe that the strength of our multidisciplinary society is in a great extent a result of the profile of our membership, visibility of our annual meeting, and funding. I propose to work closely with the presidency, councilors, and other society members to increase membership volume and diversity, and foster a broader involvement of our members with the society's activities and programs. Likewise, I propose to work on the development of new mechanisms to promote a more effective participation of sister societies and their respective memberships in our meetings. To this end, I intend to systematically search for stronger corporate (external) and ASP (internal) funding to support a larger number of high-impact symposia in our annual meetings. I also intend to continuously work on the development of new funding mechanisms to increase the availability of travel awards for our younger members, and provide our more senior members from economically disadvantaged countries with the opportunity of attending our meetings on a more regular basis.

Carl Hirschie Johnson

Division 2 (Photosensory Biology)
Department of Biological Sciences, Vanderbilt
University, Nashville, TN.

Education: B.A., 1976, University of Texas; Ph.D.,
1982, Stanford University; Post-doctoral research, 1982-
1987, Harvard University.

Appointments: Professor of Biological Sciences,
Vanderbilt University (1999-present), Associate
Professor (1994-1999), Assistant Professor (1987-1994).

Research Interests: Circadian clocks, Bioluminescence,
Photobiology, Bioluminescence technique development
(e.g., BRET), and Cell Biology.

ASP Service: Symposia speaker at ASP meetings in
1984, 1999, and 2001; reviewer and "informal"
Associate Editor for *Photochemistry and Photobiology*.

Candidate's statement: As Councilor, I will listen to
the needs and concerns of ASP members, and attempt to
improve the balance at ASP meetings between presenta-
tions of basic research versus applied research, so as to
facilitate communication and interaction between scien-
tists working on different parts of the photobiological
spectrum.

Emmanuel Liscum

Division 2 (Photosensory Biology)
Division of Biological Sciences, University of Missouri,
Columbia, MO.

Education: B.S., 1988, In Vitro Cell Biology and
Biotechnology, State University of New York at
Plattsburgh; Ph.D., 1992, Plant Biology, The Ohio State
University; NIH-NSRA Postdoctoral Fellow, 1992-96,
Department of Plant Biology, Carnegie Institution of
Washington-Stanford.

Appointments: Assistant (1996) and Associate (2001)
Professor of Biology, Division of Biological Sciences,
University of Missouri.

Research Interests: Photosensory biology with a focus
on the molecular mechanisms of signal perception,
transduction and response during photomorphogenesis in
plants.

ASP Service: Member since 1998; regular attendee and
speaker at annual meetings since 1997; reviewer for
Photochemistry and Photobiology since 1991; ASP 2000
New Investigator Award winner; Photobiology
Foundation Board Member, 2001.

Candidate's Statement: Diversity is one of greatest
strengths of an active democratic organization. A brief
reflection on the national events of the last quarter of
2001 can clearly demonstrate how this can play out in
times of adversity. Thankfully ASP does not face such
tragic conditions. Yet, diversity within our membership is
no less important. Our most important diversity is our
breadth of research interests; from microbe and plant
photosensory biology to the effects of solar irradiation
on human health. As an ASP Councilor I will work tire-
lessly to provide all ASP members a voice in our society,
such that no sub-groups, however small in numbers, are
left out. When planning national meetings the Council
has an obligation to meet the society needs by providing
forums for broad topics in photobiology and I will work
to assure this access. Beyond these inclusion issues I
will work to enhance the issues ASP can influence, such
as educational and research initiatives, as well as legisla-
tive agenda.

Patrick J. Neale

Division 3 (Photosynthesis and Photoconversion)
Smithsonian Environmental Research Center, Edgewater
MD.

Education: B.A., 1976, State University of New York,
Purchase; M.A., 1981, Columbia University; Ph.D.,
1985, University of California, Davis; Postdoctoral
Fellow, 1985-1988, Department of Plant Biology,
University of California, Berkeley; Visiting Research
Scientist, 1986, 1988, Freshwater Biological Assoc.,
U.K..

Appointments: 1993-present, Photobiologist and
Supervisory Photobiologist, Smithsonian Environmental
Research Center; 1990-1993, Adjunct Scientist, Bigelow
Laboratory for Ocean Sciences; 1988-1993, Research
Fellow, Dept. of Plant Biology, University of California,
Berkeley.

Research Interests: Effects of ultraviolet radiation on
marine algae and other aquatic organisms; spectral
dependence of algal photosynthesis; variation of solar
UV-B in relation to atmospheric properties; optics of UV
transmission in aquatic habitats.

ASP Service: Member of the Society since 1996; con-
tributor and reviewer for *Photochemistry and
Photobiology*; attendee and speaker at annual meetings;
organizer of symposium for 2002 meeting

Candidate's Statement: As a member of the council, I
would work to expand the involvement of the environ-
mental photobiology community in society activities par-
ticularly through recruiting members, organizing sym-
posia at meetings and special issues of the journal. I

would work for more public outreach on issues of the environmental impacts of UV as well as health implications of UV exposure.

David H. Sliney

Division 5 (Environmental Photobiology and UV Effects)

Department of Environmental Health Sciences, Baltimore, MD.

Education: B.S., Physics, Virginia Tech University, Blacksburg, VA; M.S., Physics and Radiological Health, Emory University, Atlanta; Ph.D., Biophysics and Medical Physics, University of London, Institute of Ophthalmology, London.

Appointments: U.S. Army Environmental Hygiene Agency (later, Center for Health Promotion and Preventive Medicine) at Aberdeen Proving Ground, MD, 1965-present; Associate, Johns Hopkins School of Hygiene and Public Health, Department of Environmental Health Sciences, Baltimore, MD, 1988-present; Fulbright Fellow to Yugoslavia in 1977 and temporary advisor to WHO, member of International Commission on Non-Ionizing Radiation Protection.

Research Interests: Human health effects of optical radiation; photobiological effects of ultraviolet radiation, lasers and high-intensity light sources emphasizing threshold injury studies and optical radiation safety; beneficial effects of optical radiation on human health; and eye and skin protection. He performed many environmental studies of ocular and skin exposure from sunlight and published more than 200 scientific articles and co-authored two books concerning the safe use of lasers, medical lasers and intense light sources.

ASP Service: Member since 1972; he organized a tutorial short course on the measurement of action spectra for the 1994 ASP meeting and presented scientific papers at a number of meetings since 1973; member of US National Committee for Photobiology in 1979-1981.

Goals: I would like to see the ASP help build further bridges between the research community and the applied sector and encourage more photobiologists to take part in the CIE technical committees in photobiology, since CIE standards for action spectra, terminology and units influence our research not only directly, but indirectly, since the value of photobiological research--and need for support--becomes apparent to the applied technology sector. New avenues for international exchange should be encouraged. I favor new services to members (as through the electronic web) that are truly useful and cost-effective, so as not to pressure a dues increase.

Dennis P. Valenzeno

Division 4 (Photomedicine)

Department of Molecular and Integrative Physiology, The University of Kansas Medical Center, Kansas City, KS.

Education: B.S., 1971, Physics, Case Western Reserve University; M.S., Physics, 1975, Case Western Reserve University; Ph.D., 1976, Physiology, Case Western Reserve University.

Appointments: Associate Professor of Physiology, 1987-present, University of Kansas Medical Center; Assistant Professor of Physiology, 1980-1987, University of Kansas Medical Center; Instructor of Physiology, 1979-1980, Emory University; Postdoctoral Fellow in Physiology, 1976-1980, Emory University.

Research Interests: Photosensitization of ion transport process; electrophysiology; effectiveness of web-based resources in teaching/learning photobiology.

ASP Service: Associate editor, *Photochemistry and Photobiology*, 1998-present; Photobiology Online Site Coordinator, 1995-present; Treasurer, 1994-98; Finance Committee chair, 1994-98; Publications Committee, 1987-93 (chair 1995-96); Newsletter Editor, 1987-92; Education Committee, 1986-90; regularly attends meetings; chaired several symposia and platform sessions.

Candidate's Statement: As we all recognize ASP is a multidisciplinary society, and that is both its strength and its challenge. My focus as a councilor will be to encourage diversity and cooperation with other photobiology organizations such as ESP and IUPB (formerly AIP) and to promote participation of all ASP divisions, especially at annual meetings. I am particularly interested in education and in the application of computer and web-based technologies to further photobiology. Photobiology Online (www.POL-US.net and www.POL-Europe.net) and the Digital Photobiology Compendium (www.photobiology.info) are examples of ways to approach these goals, and I will continue to encourage ASP to take advantage of these resources to accomplish its mission.

Thomas C. Vogelmann

Division 3 (Photosynthesis and Photoconversion)

Botany and Agricultural Biochemistry, University of Vermont, Burlington, VT.

Education: B.S., Biological Sciences, University of Vermont, 1974; M.S., Botany, Washington State University, 1977; Ph.D., Biology, Syracuse University, 1980; NSF Postdoctoral Fellow, 1981-84, Institute of Plant Physiology, University of Lund (Sweden); Docent, 1984, University of Lund.

Appointments: Professor and Chair, Botany and Agricultural Biochemistry, University of Vermont, 2001-present; Visiting Research Fellow, Research School of Biological Sciences, Australian National University, 2000; Visiting Research Scientist, University of Lund (Sweden), 1990-91; Assistant to Full Professor, Botany, University of Wyoming, 1984-2001.

Awards: Robertson Lecture, Australian and New Zealand Societies for Plant Physiology 2000; Finsen young investigators award, ASP 1984.

Research Interests: Plant photobiology including optical properties of leaves and photosynthetic tissues; instrumentation development for studying leaf optics and photosynthesis; photoacoustics; plant adaptations to their light environment. Current work involves measurement of photon transit times in leaves, photoprotection in snow algae, and absorption profiles in leaves related to tissue anatomy and chloroplast movement.

ASP Service: Member since 1998.

Candidate's Statement: My goals as a Councilor would be to work with the Board of Directors to expand the membership of ASP by recruiting young scientists from under-represented fields of plant photobiology and photosynthesis. I would take advantage of the unique multidisciplinary membership of ASP by promoting and sponsoring interdisciplinary symposia at ASP annual meetings and I would work to increase the presence of plant photobiology at these meetings. I would actively solicit the submission of high-quality manuscripts from plant-oriented research labs to *Photochemistry and Photobiology*, and I look forward to supporting and contributing to the ongoing educational activities of the society. Finally, many new ideas and opportunities arise through interaction with colleagues overseas and I would work to facilitate international activities. By pursuing this agenda, I hope to help increase the visibility of ASP and photobiology.



Professor Leonard I. Grossweiner 1924 - 2001

Leonard Grossweiner, former ASP President, recently passed away. Professor Grossweiner was born in Atlantic City, New Jersey and grew up in Manhattan. He was in the first class at Bronx Science High School and then studied chemical engineering at the City College of New York. His college was interrupted by the U.S. Army during World War II where he was sta-



*Len Grossweiner,
former president of ASP*

tioned in Dutch Guiana at a small air base. He returned to college and graduated with a BS in chemical engineering. In April 1947 he traveled to Chicago with "two suitcases and a job." He worked at the Argonne National Laboratory for ten years. While doing research at Argonne he attended classes at Illinois Institute of Technology at night and earned a MS degree in Chemical engineering in 1950, married Bess Tornheim in 1951 and earned a Ph.D. in physics in 1955. He joined the physics department at IIT in 1957 and retired in 1996 as a professor emeritus and former department chair. He also directed research in the laser center at Ravenswood Hospital from 1985 to 2001 and wrote 170 articles and three books, the last of which "The Science of Phototherapy: an Introduction" will be published posthumously in 2002 by Kluwer Academic Publishers.

His early research activity at Argonne Lab involved the new photochemical technique of flash photolysis. Other interests included fast reaction photochemistry, color centers in alkali halides, and solid state photosensitization. Eventually he appreciated that the work on "molecules of biological interest" was not actually very interesting to biologists because biology takes place in tissues and not in dilute aqueous solutions. In the 1980's his research interests moved towards photobiology as he began to study more realistic models of biological photosensitizations in light-scattering environments as well as tissue optics and laser-tissue interactions. At this time he became active in the ASP, serving as its president in 1988.

Professor Grossweiner made significant contributions to the field of light dosimetry for photodynamic therapy. He was a Fellow of the American Physical Society and a Fellow of the American Society for Lasers in Surgery and Medicine. He was also a founding member and chair of the Division of Biological Physics of the American Physical Society and the last chair of the U.S. National Committee on Photobiology.

He is survived by his wife, Bess, three of their four children and four beloved grandchildren.

- **Linda Jones**

Search for Editor

Photochemistry and Photobiology

The position of Editor of *Photochemistry and Photobiology* will be available starting January, 2004.

The major responsibilities of the Editor are to increase the quality of papers published in the Journal, to encourage submission of manuscripts across the entire range of photobiology and biologically relevant photochemistry, to manage the reviewing of manuscripts, and to oversee the Editorial Office staff. Support is provided for these activities by the American Society for Photobiology, which owns the Journal. Applications are encouraged from qualified candidates with a strong interest in advancing knowledge in photochemistry and photobiology and scientific expertise in a relevant area. Applications should be received by May 1, 2002. For further information about submission of applications, please contact:

Irene E. Kochevar, Chair, Editor Selection Committee
Wellman Laboratories of Photomedicine
Department of Dermatology
Harvard Medical School
Massachusetts General Hospital WEL-224
Boston, MA 02114
Email: kochevar@helix.mgh.harvard.edu

ASP Archives

Irene Kochevar, ASP archivist, has sorted through files from the Secretariat and will be depositing them soon in the ASP archives at the University of Tennessee in Knoxville. If any members have material that should be added, please contact Irene at Kochevar@Helix.MGH.Harvard.edu to arrange for its transfer. Any materials to be deposited should be well described and inventoried both chronologically and by content.

Photograph Albums of earlier ASP Meetings

Prior to the 25th anniversary of the ASP, founding President Kendric Smith prepared albums of photographs of several (but not all) meetings over the years. We propose to place these in the hands of the Secretariat so that they will be readily available to members, and further propose that we try to collect pictures from earlier meetings not now included and make additional

albums (to be kept along with the program of the meeting from that year). We ask members to search their own photograph collection for prints to be included there, which should be sent to Irene Kochevar at Kochevar@Helix.MGH.Harvard.edu, along with identification of the year and the persons picture.

Photographs of Quebec City meeting

ASP archivist Irene Kochevar seeks a volunteer to take (and/or collect) photographs of the Quebec City meeting and to prepare an album for the archives. It need not be a large number of pictures but should provide a good representation of the participants, the site and the spirit of the meeting. In mounting the pictures to be put in an album the persons should be identified. It will be the responsibility of the person who assumes this task to identify and charge a person for the meeting in the subsequent year. Please contact Irene at Kochevar@Helix.MGH.Harvard.edu.

New Book Series

Comprehensive Series in Photosciences

A new book series, Comprehensive Series in Photo-sciences, aims to provide in-depth coverage of the different fields related to light effects - photobiology, photochemistry, photomedicine, phototechnology and related subjects.

Publishing state-of-the-art accounts, each volume provides a critical evaluation of the directions that a specific field is taking, outlines hotly debated or innovative topics and include ready access to references to recent literature. The first three volumes were published this summer and are:

- Volume 1 - *Photomovement*
edited by D.-P. Häder and M. Lebert
- Volume 2 - *Photodynamic Therapy and Fluorescence Diagnosis in Dermatology*
edited by P. Calzavara-Pinton,
R-M. Szeimies, and B. Ortel
- Volume 3 - *Sun Protection in Man*
edited by P.U. Giacomoni

The *Comprehensive Series in Photosciences* is published by Elsevier Science for the European Society for Photobiology. Further information and complete contents lists can be found on the web site at:
<http://www.elsevier.com/locate/series/csp>.

American Institute of Biological Sciences 53rd Annual Meeting

"Evolution: Understanding Life on Earth"

March 22-24, 2002
Key Bridge Marriott Hotel
1401 Lee Highway
Arlington VA 22209

Researcher, Educators, and Students:

The 2002 AIBS annual meeting, "Evolution: Understanding Life on Earth," presents an excellent opportunity for biologists to share the latest developments in evolution research and education. Attendees will hear distinguished plenary speakers present synthesizing lectures from the forefront of their fields, then will join those speakers and other equally notable scholars in informal discussion groups. The rest of the meeting's program includes a session on online resources for research and education; a session on the central role of organismal biology; contributed posters; a diversity scholars competition; and a presentation by Darwin scholar and stage performer Richard Milner of his popular musical, "Charles Darwin: Live and in Concert."

Speakers and discussion leaders include: Francisco Ayala, Rodger Bybee, Joel Cracraft, Niles Eldredge, Douglas Futuyma, Peter and Rosemary Grant, Alison Jolly, John Jungck, Joe Levine, Paula Mabee, Kenneth Miller, Loren Rieseberg, Eugenie Scott. Topics include: evolutionary mechanisms and patterns, replication studies, genomics and development, conservation and population biology, formal education K-16, public education, anti-evolution, public policy and politics, and faith-based issues.

Register at www.aibs.org or call 703-790-1745
Email: admin@aibs.org

Choosing the Right Light

The debate on the benefits of full-spectrum lighting

Jennifer A. Veitch, Ph.D.*

The subject of environmental lighting conditions for humans is commanding widespread attention in the popular press. Thus, the value of full-spectrum lighting must be examined more closely by professional photobiologists. Lighting design should accommodate six human

needs: visibility, activity, health and safety, mood and comfort, social contact and communication, and aesthetic appreciation. Claims about the superiority of one lighting product over another should be evaluated in all of these areas. Assessment also requires attention to architectural design, maintenance, economics, and energy usage. No one lighting product can best satisfy all criteria.

Evaluating full-spectrum lighting A full-spectrum fluorescent lamp mimics daylight in the northern sky, with emission throughout the visual spectrum and additional emission in the ultraviolet (UV) region. It appears slightly blue and renders colors well. Some people have claimed that the spectral similarity of full-spectrum fluorescent lamps and daylight makes such lamps better because they improve visual acuity, mood, and attendance and achievement of students.

Canada's National Research Council's Institute for Research in Construction has reviewed the literature on full-spectrum lighting to investigate these claims and has shown that most of the hypothesized benefits are not supported by the scientific literature.

Canada's NRC has shown that most of the hypothesized benefits of full spectrum lighting are not supported by the scientific literature.

Visibility Seeing the details of an object depends on the size, contrast, and brightness of the object and on characteristics of the viewer, age in particular. Some researchers have claimed that lamps with more blue light improve visual acuity because blue light reduces pupil size and therefore increases depth of field¹. If this were true, full-spectrum lamps would produce better visibility than most other lamp types. However, the effects that have been demonstrated in the laboratory under strict experimental controls have not been observed in studies under normal viewing conditions².

Performance and behavior Several prominent studies involving classroom lighting have received widespread publicity and have led some classroom teachers to change the lighting, even at their own personal expense. However, close examination of these studies has revealed problems in research design and statistical analysis³.

Mood and comfort The most widely claimed benefit for full-spectrum lighting is that it prevents or treats depression. It is true that light therapy is an effective treatment

for the clinical condition known as Seasonal Affective Disorder (SAD) and might even be helpful for other forms of depression. However, the type of white light that is used in SAD therapy does not affect treatment outcomes⁴. Furthermore, the effectiveness of this medical treatment for certain individuals does not mean that everyone should be exposed to high light levels⁵.

Light therapy is an effective treatment for SAD, but this does not mean that everyone should be exposed to high light levels.

Safety and health Other health benefits attributed to full-spectrum light are based on its UV component. Some researchers have claimed that the presence of indoor UV radiation is essential to human health because our prehistoric ancestors evolved in a UV-rich environment. Others fear that the UV exposure from full-spectrum artificial light could increase the incidence of various forms of skin cancer. There is little evidence to support the view that UV-enriched indoor radiation would improve human health⁶.

Aesthetics Full-spectrum lights, compared with certain other lamp types, allow people to more easily distinguish between colors. However, lamps that do not provide full-spectrum illumination are more aesthetically pleasing under certain circumstances⁷. For example, most people do not want the very cold color of a full-spectrum lamp in living rooms; most people prefer the warm color of an incandescent lamp in living rooms.

Social connections and communication Non-visual processes related to illumination are also important. When people are in environmental conditions that they prefer, they are often in a good mood, or have what psychologists call *positive affect*. This may lead them to behave more co-operatively and creatively. Preferences for different types of light vary, but some studies have found that full-spectrum lighting is not well-liked in comparison to warmer color temperatures, especially if the light level is low⁸.

Conclusions: Is full-spectrum lighting the quality choice? Much remains to be learned about lighting types and their effects on people. For example, there might be a benefit to using lamps with some UV output in circumstances where there is very little daylight (such as the far North), but this question has not been rigorously studied.

We do know, however, that for general use in offices, schools, and institutions, there is no particular benefit to using full-spectrum lamps over any other lamp type. A lamp with good color-rendering properties allows users to make fine color discriminations. This could be a full-spectrum lamp but other lamp types are also suitable.

The most important consideration in creating good-quality lighting is not the lamp type. Codes and standards are silent about lamp type, focusing instead on light levels, distribution, and glare control as the most important considerations. Characteristics of the end-users, the environmental setting and activities within the setting, the architecture, and economic issues must all be considered.

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*Jennifer Veitch is a Senior Research Officer at the Institute for Research in Construction (IRC) at the National Research Council of Canada. She is also chair of the CIE Technical Committee TC 6-11, "Systemic Neuroendocrine Effects of Optical Radiation". A version of this article appeared in *Business in Vancouver Construction Directory* 2000, Issue No. 575A, p. 11. For more information about lighting research at IRC, visit <http://www.nrc.ca/irc/ie/light>

Photofrin-mediated photodynamic therapy for treatment of aggressive head and neck nonmelanomatous skin tumors in elderly patients*

Vanessa Gayle Schweitzer, M.D.

Department of Otolaryngology-Head and Neck Surgery, Henry Ford Health System, Detroit, Michigan 48202, USA.

Objectives/Hypothesis: Aggressive nonmelanomatous skin tumors (basal cell carcinoma, squamous cell carcinoma, and Bowen's disease) of the head and neck often occur in Caucasian elderly patients because of prior history of radiation therapy for teenage acne and adenoid hypertrophy; severe solar-induced skin damage, basal cell nevus syndrome, and other genetic skin diseases; chemical carcinogen exposure; and drug-induced immunosuppression. In patients with large, multifocal recurrent tumors, standard therapy with acceptable cosmetic outcomes may be difficult. Photodynamic therapy (PDT) with photosensitizing agents selectively taken up by skin provides a primary or adjunct intraoperative option for treatment of this special group of cancer patients.

Study Design: Retrospective review.

Methods: Patients (age range, 60-92 y) were injected with 1.0 mg/kg Photofrin (dihematoporphyrin derivative) followed 60 hours later by intraoperative laser light activation. Light was delivered through microlens fiber by means of an argon dye laser at 630 nm at a light dose of 100 to 300 J/cm² microlens delivery for PDT alone and 50 to 100 J/cm² microlens delivery for tumor bed resection sites in the case of adjunct PDT combined with surgical resection.

Results: Twelve cases of aggressive recurrent non-melanomatous cutaneous tumors of the head and neck were treated. Five patients received intraoperative PDT combined with surgical resection, including radical mastoidectomy, lateral temporal bone resection, partial maxillectomy with temporalis myofacial flap reconstruction, and wide local resection with secondary intention healing of exposed scalp wounds. Seven patients were treated with PDT alone for extensive multiple cutaneous lesions or wide-field primary or recurrent non-melanomatous tumors. Ten patients achieved complete responses (follow-up, 6-60 mo) with excellent wound healing and cosmetic outcomes.

Conclusions: Photofrin-mediated PDT is an excellent locoregional oncological modality for aggressive primary or recurrent basal cell carcinoma and squamous cell carcinoma, particularly in elderly patients who were previously treated with extensive Mohs microsurgery,

surgical resection, and external-beam radiation therapy. Multiple repeat treatments are well tolerated, painless, without systemic morbidity, and amenable to local anesthesia or intravenous sedation for PDT alone, and wound healing and cosmetic outcomes are excellent.

*Reprinted with permission from *The Laryngoscope* (2001) 111:1091-8.

Low Maternal Vitamin D and Schizophrenia in Offspring*

Sir - Several reports describe patients with velocardiofacial syndromes associated with deletions in chromosome 22q11, hypoparathyroidism, and hypocalcaemia secondary to the primary anatomical defect, and schizophrenia^{1,2}.

Such cases provide support for a hypothesis put forward a generation ago of one of the environmental cofactors in the cause of schizophrenia. Moskowitz³ noted that low concentrations of maternal vitamin D in the winter months would explain epidemiological data showing that a significant preponderance of schizophrenic patients in the Northern hemisphere are born in the first quarter of the year. Vitamin D could be a crucial regulator of brain development in the second and third trimesters of pregnancy. I note that the historical record of schizophrenia is consistent with the low maternal vitamin D and schizophrenia hypothesis.

Schizophrenia is thought of as being as old as our species because "every town had a fool". Surprisingly, however, the only case of schizophrenia⁴ much before 1800 that passes Diagnostic and Statistical Manual (DSM) IV muster is that of the Poor Tom/Edgar character in Shakespeare's *King Lear*⁵. By contrast, virtually all of the other major common DSM-IV Axis I and II disorders, and many neuropsychiatric disorders can be found in the Old Testament alone. Alcohol or other substance use, dependence, or withdrawal, vitamin deficiencies, and temporal-lobe epilepsy need to be included in the town fool's differential diagnosis.

The low maternal vitamin D hypothesis for schizophrenia is consistent with this historical record, which shows a possible dearth, and clear paucity, of cases of schizophrenia before 1800. In the past, more time was spent outside in the sun than today. The prospect that schizophrenia could be driven, even partly, into extinction by nutritional and sunlight repletion or supplementation, as neural-tube deficits have been by folic-acid supplementation⁵, would be most remarkable.

Eric Lewin Altschuler

Brain and Perception Laboratory, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093, USA (Email: ealtschuler@ucsd.edu)

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2. Bassett AS, Chow EWC, Weksberg R. Chromosomal abnormalities and schizophrenia. *Am J Med Genet* 2000; 97: 45-51.
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*Reprinted with permission from *The Lancet* (2001) 358: 1464.

Upcoming Events

February 21, 2002

Photomedicine Society Meeting

New Orleans, Louisiana

Contact:

Susan Milberger

Fax: 214-648-0280

Email:

susan.milberger@utsouthwestern.edu

March 17-23, 2002

Summer 2002 (TBA)

Protein Purification:

Isolation, Analysis, and Characterization of GFP

Rutgers University, New Brunswick, NJ

A five and one-half day hands-on laboratory course using the remarkable Green-Fluorescent Protein (GFP), a novel marker for gene expression, as the source material.

Contact:

Prof. William W. Ward

Tel: 732-932-9562 ext. 216 or 212

Email: crebb@rci.rutgers.edu

Web site:

<http://www.rci.rutgers.edu/~meton/protein.html>

March 22-24, 2002

American Institute of Biological Sciences 53rd Annual Meeting

"Evolution: Understanding Life on Earth"

Key Bridge Marriott Hotel

1401 Lee Highway

Arlington VA 22209

Register at www.aibs.org or call

703-790-1745

Email: admin@aibs.org

(see complete announcement on p. 13)

April 21 – 24, 2002

Biohydrogen 2002

Ede, Netherlands

Contact:

Marcel Janssen

Wageningen University

Department of Agrotechnology and Food Sciences

Food and Bioprocess Engineering Group

P.O. Box 8129

6700 EV Wageningen, The Netherlands

Tel: +31-317-483396

Fax: +31-317-482237

Email:

Biohydrogen.2002@algemeen.pk.wau.nl

May 19-24, 2002

Gordon Research Conference on

Photosensory Receptors and Signal Transduction.

Il Ciocco, Barga, Italy (Tuscany).

Contacts:

John Spudich, conference chair,

John.L.Spudich@uth.tmc.edu,

Pill Soon-Song, vice-chair,

pssong@ksc.kumho.co.kr

Web site: <http://www.grc.uri.edu/programs/2002/photosen.htm>

June 26-28, 2002

1st Asian Conference on Photobiology

Awaji Yumebutai International Conference

Center, Hyogo, Japan

Web site:

<http://www.cherry.bio.titech.ac.jp/paj2.htm>

June 30, 2002

World Photodermatology Day

Paris, France

Sunday afternoon, the day before the 20th

World Congress of Dermatology.

Contact:

Rik Roelandts

Photodermatology Unit

University Hospital

Kapucijnenvoer 35

B-3000 Leuven Belgium

Email: Rik.Roelandts@uz.kuleuven.ac.be

July 13-17, 2002

30th American Society for

Photobiology Annual Meeting

Le Chateau Frontenac

Quebec City, Canada

Contact:

Woody Hastings, Chair of the Scientific Program

Tel: 617-495-3714

Fax: 617-496-8726.

Email: Hastings@FAS.Harvard.edu

July 14-19, 2002

XIXth IUPAC Conference on

Photochemistry

Budapest, Hungary

Contact:

Hungarian Chemical Society (MKE)

H-1027 Budapest, Fu u. 68. Hungary

Phone: 36-1-201-6886

Fax: 36-1-201-8056

Email: mail.mke@mtesz.hu

August 25 – 30, 2002

International Conference on

Luminescence and Optical

Spectroscopy of Condensed Matter (ICL'02)

Renaissance Hotel, Jerusalem, Israel

Contact:

ICL'02 Secretariat, c/o Unitours Israel Ltd.

P. O. Box 3190

Tel Aviv 61031, Israel

Telephone: +972 3 5209999

Fax: +972 3 5239299

Email: Meetings@unitours.co.il

September 9 – 13, 2002

XVIIIth International Pigment Cell Conference

Kurhaus Hotel, Scheveningen, The Netherlands

Contact:

Mrs. Caroline M. van Battum

P.O. Box 2084, NL-2301 CB Leiden The Netherlands

Telephone: +31(0)715276434

Fax: +31(0)715275262

Email: C.M.van_Battum@lumc.nl