

# PASPCR

## *Newsletter*

Volume 1 Number 3

September, 1993

### **Introduction . . .**

The quarterly **PASPCR Newsletter** is intended to serve as an informal means for the members of our Society to communicate with one another. As such, we invite our membership to actively contribute to the *Newsletter*. Help us to update the Job Listings and Calendar of Events. If you attend a scientific meeting at which you heard about work which you think will be of interest to the membership of the **PASPCR**, please write a few paragraphs summarizing what was presented and share it with us. If you should have a change of affiliation and address, we'd like to know that, too. This is **your Newsletter**, and we depend upon you to help us make sure it best serves the Society's needs. Contributions and comments can be sent to any of the members of the Publications Committee listed in this issue. Special thanks go to Julian M Menter as a Contributor to this issue.

### **Welcome to New Members :**

We welcome the following new members to the **PASPCR** . . . .

Timothy J. Frew  
Isabelle C. Le Poole  
Hee-Young Park  
Kenneth M. Tramosch

If anyone is interested in joining our Society or wishes to sponsor a member, application forms can be obtained from Dr. Richard King.

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Pigment Cell Research**

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Joseph Bagnara  
Roger Bowers  
Murray Brilliant  
John Brumbaugh  
Alistair Cochran  
Kowichi Jimbow  
Seth Orlow  
John Pawelek

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James Nordlund  
*Past-President*

The PASPCR Newsletter is published quarterly; for further information and/or to submit contributions, please contact:

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New York Univ Med Center  
550 First Avenue, RM H100  
New York, NY 10016  
FAX: (212) 263-8752

## Calendar of Events :

### **September 21 - 23, 1993**

Fifth World Congress on Cancers of the Skin, to be held Berlin, Germany (contact: Dr. Claus Garbe, Department of Dermatology, University Medical Center Steglitz, Hindenburgdamm, 30, 1000 Berlin 45, Germany; FAX: 49/30/798-4141)

### **September 26 - 30, 1993**

XV<sup>th</sup> International Pigment Cell Conference, to be held in Kensington, UK (contact: Mrs. Rosemary Barton, IPCC Conference Office, P.O. Box 1773, London E17 9LW, United Kingdom, FAX: 44/81/503-6463)

### **October 28 - 31, 1993**

Tricontinental Dermatology Conference, to be held in Kyoto, Japan (contact: Dr. Koucihi Ikai, Dept of Dermatology, Kyoto University Faculty of Medicine, Kyoto 606, Japan)

### **December 11 - 15, 1993**

American Society of Cell Biology Meeting, to be held New Orleans, Louisiana, (contact: ASCB National Office, 9650 Rockville Pike,

Bethesda, MD FAX: 301/530-7139)

**March 11 - 12, 1994** Melanin Symposium, Melanin: Its Role in Human Photoprotection, to be held in Crystal City, Virginia, (contact: Dr. Ago Ahene, 3696 Haven Avenue, Redwood City, California, 94063, FAX: 415/368-4470)

**April 10 - 13, 1994** Annual Meeting of the American Association for Cancer Research, to be held in San Francisco, California (contact: AACR Office, Public Ledger Building, 620 Chestnut Street, Suite 816, Philadelphia, PA 19106-3483 FAX: 215/440-9313)

**April 27 - 29, 1994** Annual Meeting of the Society for Investigative Dermatology, to be held in Baltimore, Maryland, (contact: SID Office, Department of Dermatology, University Hospitals of Cleveland, 2074 Abington Road, Cleveland, OH 44106, FAX: 216/844-8993)

**June 26 - 29, 1994** 5th PASPCR Annual Meeting, to be held in Philadelphia, Pennsylvania, (contact: Dr. Gert Jacobsohn, Department of Biological Chemistry, Hahnemann University, Broad and Vine, Philadelphia, PA 19102-1192, FAX: 215/762-3722)

## Corporate Sponsors

The **PASPCR** would like to acknowledge and thank our Corporate Sponsors. Financial gifts from these sponsors have allowed our Society to increase benefits to the membership far out of proportion to the actual dues collected from members. Monies contributed by these sponsors have been used over the years to support various **PASPCR** functions including our Young Investigator Award program, meeting travel stipends, annual meeting expenses and this *Newsletter*.

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## PASPCR Honorary Member

by Murray Brilliant

Dr. Elizabeth (Tibby) Russell, Senior Staff Scientist Emeritus at the Jackson Laboratory, has been chosen as the first recipient of an Honorary **PASPCR** Membership by unanimous vote of the **PASPCR** Council. A plaque documenting this distinction will be presented to Tibby (as she is known by her friends and colleagues) at the upcoming **PASPCR** Meeting in Philadelphia in June, 1994. Our recognition of Tibby's seminal contributions to the genetics of pigmentation represents the latest of many honors during her most distinguished career. In addition to her work in pigmentation, Tibby is widely recognized for her work in hematology, developmental biology, aging and especially for her efforts to promote the mouse as a model system for studying genetic disease. The genetics and biology of pigmentation have been an important part of her research from the beginning of her illustrious career. Her thesis work (from 1934-1937 at the University of Chicago) under Seawell Wright was on the underlying genetics of pigmentation in guinea pigs. She changed from studying guinea pigs to studying the mouse at The Jackson Laboratory, where she began her independent research 56 years ago, but her interest in pigmentation continued. Tibby began to apply a methodological, organized and quantitative approach to the characterization of a series of pigmentation mutations in the mouse. In pioneering studies published between 1946 and 1949\*, a total of six mutant loci were characterized, singly and in combination. These loci included *c* (albino), *p* (pink-eyed dilution), *d* (dilute), *b* (brown), *a* (agouti) and *W* (dominant spotting). The individual affects of mutations at these key loci and their interactive hierarchy were reported. In a recent interview, Tibby noted her pleasure at recent successful cloning and molecular characterization of all of these loci. Her predictions about the action of these genes are indeed being born out. However, she is most proud of the role that she played in the development, advancement and encouragement of the scientific careers of a now very large network of researchers. Whether directly or indirectly, all of us involved in pigmentation research are indebted to Tibby for her many efforts in promoting pigmentation research.

\*Russell, E.S., *Genetics*, 31:327-346 (1946); Russell, E.S., *Genetics*, 33:228-236 (1948); Russell, E.S., *Genetics*, 34:133-166 (1949); Russell, E.S., *Genetics*, 34:708-723 (1949).

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## 1994 PASPCR V<sup>th</sup> Annual Meeting

The V<sup>th</sup> Meeting of the **PASPCR** will be held in Philadelphia, Pennsylvania from June 26-29, 1994. Dr. Gert Jacobsohn is the Organizer of this meeting, and he and his Program Committee have already assembled a number of exciting keynote speakers and the outline of a most interesting scientific program. More information about this meeting and the tentative program will follow in future *Newsletters*. We hope that all members of the **PASPCR** will plan to attend this meeting - be sure to mark it on your calendar.

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## 1995 PASPCR VI<sup>th</sup> Annual Meeting Site :

We are currently soliciting applications from anyone interested in hosting the VI<sup>th</sup> Annual Meeting of the **PASPCR**, preferably in the middle of 1995. If you are interesting in bidding for this Conference, please contact one of the officers of the **PASPCR**. Previous meeting sites to date have been: I<sup>st</sup> - Minneapolis, Minnesota; II<sup>nd</sup> - Bethesda, Maryland; III<sup>rd</sup> - Edmonton, Alberta; IV<sup>th</sup> - Cincinnati, Ohio. The V<sup>th</sup> meeting will be held in Philadelphia, Pennsylvania (cf above).

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## In Memoriam ...

by DeWayne Townsend

Carl J Witkop, Jr, a pioneer in the field of human pigmentation passed away March 11, 1993 at the age of 72. He will be missed by all pigment biologists. Dr. Witkop was Professor Emeritus at the University of Minnesota where he had been on the faculty of the School of Dentistry since 1966 following 10 years at the National Institutes of Health. Carl founded one of the very first organized groups at the NIH to study human genetics and became Chief of the Human Genetics Section (later Branch) at the N.I.D.R. at the age of 36.

Dr. Witkop was born in East Grand Rapids, Michigan on December 27, 1920. He served with distinction in the United States Army as a Captain in the Tank Corps in North Africa and Italy in the surrender of the Italian army and he was awarded the Silver Star. He received a B.S. (Chemistry) from Michigan State in 1944 and a D.D.S. from the University of Michigan in 1949. He began his career as an oral pathologist at the National Institute of Dental Research in 1950 and earned the M.S. in Oral Pathology at the University of Michigan in 1954. He became a Diplomat of the American Board of Oral Pathology two years later and began his activities at the National Institute of Dental Research.

Dr. Witkop was a past Secretary of the American Society of Human Genetics, Director of the International Pigment Cell Society, Associate Editor of *Pigment Cell Research* and *American Journal of Medical Genetics*, President of the American Board of Oral Pathology and was active in many other national organizations. Carl had life long interests in pigment metabolism abnormalities, human inbreeding and hereditary tooth and oral diseases. He had nearly 300 scientific publications and was very instrumental in the establishment of NOAH (National Organization for Albinos and Hypopigmentation), a support and information organization for individuals and families. His last project was an epidemiological study in Puerto Rico of Hermansky-Pudlak syndrome, a disorder of defective pigmentation and blood clotting. He will be long remembered for the education of physicians and families about the diagnosis and care of this disorder.

Dr. Carl J Witkop, Jr. was much more than these professional accomplishments. He had a deep concern for appropriate medical care for patients, establishing support groups and was sometimes known to fill the refrigerator of needy individuals from his own funds. He was never ever too busy to be interrupted and gave generously of his time and attention to students, colleagues, patients and family. Carl was a good man and he will be greatly missed.

Respectfully submitted by Dr. DeWayne Townsend, student of Carl Witkop, Jr.

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## **PASPCR Secretary / Treasurer's Report :**

**by Richard King**

Following is a synopsis of the **PASPCR** Council Meeting held by telephone conference call on April 22, 1993. Hearing opened the meeting. The minutes of the telephonic Council meeting of January 28, 1993 were accepted. There were 92 paid renewal and 16 paid new members in the **PASPCR**. The balance in the checking account is approximately \$27,000. The treasurer's report was accepted.

G. Jacobsohn reviewed the plans for the 1994 Philadelphia meeting. A room commitment to the Wyndham Franklin Plaza Hotel has been made, and the estimated cost will be \$75 per room (with a 10% maximum increase limit) for a single, double or twin. A four person room will be \$85 per night. A dinner is planned for Tuesday evening, June 27. Invited keynote speakers have accepted, including Beatrice Mintz, Barbara Gilchrest and Andreas Parsegian. G. Jacobsohn gave his new FAX number: (215) 246-5826. Potential sites for the annual meeting in 1995 were discussed.

Frost-Mason gave the nominating committee report. The nominating committee consists of Frost-Mason, chair, R. Boissy, R. Bowers, N. Milos and N. Granholm. The committee selected five candidates for the three council positions to be filled on January 1, 1994. The slate of candidates will be announced to the membership with time allowed for submission of additional write-in candidates. The mail election will be held in the fall. Abdel-Malek gave the publication committee report. The publication committee includes Abdel-Malek, chair, S. Orlow and M. Brilliant. Suggested additional subjects for future newsletters included a list of manuscripts to appear in *Pigment Cell Research*, book reviews and reviews of other meetings. Members could also be invited to submit information on books or non-academic publications they have written. J. Bagnara gave the membership committee report. A brochure for the Society is needed and King was asked to develop the first draft. Authors publishing in *Pigment Cell Research* who are not members of the Society should be sent a form letter and a brochure inviting them to join the Society. It was suggested that the entire membership be listed in the newsletter so that each society member could identify people who should be encouraged to join. King reviewed the recent communication with the American Skin Association, Inc. regarding the Vitiligo Research Award. This award is now to be given directly by the American Skin Association and will not be given through the **PASPCR**. An *ad hoc* committee was appointed to investigate a **PASPCR** Senior Investigator Award. A. Cochran, J. Pawelek and J. Nordlund, chair.

The first Honorary Member will be Elizabeth S. Russell, Ph.D. A letter of acceptance from Dr. Russell has been received by Hearing. It was suggested that the award be announced in *Pigment Cell Research* in the next few months with the plaque being awarded at the next **PASPCR** meeting in 1994.

Travel stipend requests for the London meeting were reviewed. A total of 7 requests were received and five met the established criteria. The travel stipend for 1993 will be increased to a maximum of \$500 for airfare to attend the IPCC meeting in London. The increase in the amount was necessary to provide easier access to the meeting.

There being no further new business, the meeting was adjourned. Minutes prepared by King, Secretary/Treasurer, **PASPCR**.

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## **Meeting Report :**

by **Julian M Menter**

**21st Annual Meeting - American Society for Photobiology**, June 21-26, 1993, Chicago, Illinois

There were 20 symposia, 84 contributed papers, 104 posters, 3 special lectures, 3 schools, one short course, and one workshop. These papers covered virtually all aspects of photobiology. The following is condensed from papers which were deemed by this reporter to be of interest to pigment cell biologists. This list undoubtedly reflects the personal prejudice of the reporter; a full listing of abstracts is available on request. Abstracts of Special Interest to Pigment Cell Biologists follow:

**Symposium #1: Monitoring Networks and Ozone Depletion.** Of potential interest to pigment cell biologists because of the possible link between melanoma and solar UV. **CR Roy and HP Gies** compared solar UV spectral measurements (in Australia) with model calculations. They described an educational intervention program which includes UVB charts for TV stations, use of a solar diary, and a radiation protection program. **D Berger** described the Robinson-Berger network in monitoring solar UV in the US. **LT Cupitt** described the UVB monitoring program at the USEPA. **JH Gibson** described the monitoring program at the USDA. **AR Webb** described aspects of quality assurance and quality control in the measurement of spectral data. **BK Armstrong** discussed the connection between measurement of surface UV irradiance and observed health effects, and concluded that these two are complementary rather than complete descriptions in themselves. In separate papers, **P Simon** and **J Frederick** discussed the effect of natural and man-made variations in atmospheric conditions in monitoring UV.

**M Berwick: Epidemiologic Studies of Melanoma: The Relative Roles of Sun Exposure and Early Detection.** Epidemiologic analyses generally show 2-fold relative risks for the various types of sun exposure ranging from 0.29 (a protective effect) to 13.0, depending on the type of sun exposure measured and the amount of control for the effect of modifiers such as skin type. More recent studies have demonstrated a strong association between sun exposure and nevi formation. Analysis of the role of sun exposure in increasing melanoma must be placed in the context of other time trends, such as early detection. Data from several population-based slide reviews of melanoma indicate that the largest proportion of increasing incidence in melanoma is due to the highest rates for thinner lesions (*in situ* and < 76  $\mu$ m Breslow depth) while rates for thicker lesions have remained somewhat more stable.

**RM Sayre, MR Chedekel and AB Ahene: Sunlight, Sunscreens, and Free Radicals.** Spin-trapping techniques have been applied to a number of sunscreen products to study the photochemical generation of free radicals by these compounds. Results suggest that highly efficient sunblocks as octyl dimethylpaba, butyl methoxydibenzoylmethane, TiO<sub>2</sub> and ZnO produce sunlight-induced free radicals. The intensities of the free radicals generated by TiO<sub>2</sub> and ZnO are 2-3 times orders of magnitude as those generated by "chemical" sunscreens and by melanin. It was speculated that free radical production by melanins might be one way by which harmful radiation is attenuated.

**HZ Hill, GJ Hill, U Schlehaider and K Cieszka: Survival of Cloudman Melanoma Cells of Varying Melanin Content after Exposure to UVA, UVB, UVC, and Solar Simulated (FS-**

**20) Radiation.** Cloudman S91/amel (hypomelanotic) and S91/I3 (melanotic) cells were exposed to graded doses of UVC (254 nm), UVB (TL01; 50% 312 nm) UVA (Alison lamp) and FS-20 radiation. Results indicate that the S91/I3 cells were slightly more sensitive to UVC than S91/amel. The difference is augmented when UVB or the FS-20 lamps are used. However, the reverse order of sensitivity was obtained for the UVA source; this parallels earlier results with  $\gamma$ -rays. These results indicate the complexity of response to broadband solar radiation by these melanoma cells.

**FA Anthony and ME Costlow: Protein Kinase C Isotype Expression in Melanocytes: Effects of Phorbol Esters, UVA, and PUVA.** Normal human melanocytes (NHM) require phorbol esters for growth in culture; UVA and Psoralen + UVA (PUVA) effect their growth presumably through protein kinase C (PKC). These authors examined PKC isotypes by immunocytochemistry in NHM cultured in 10 ng/ml TPA, 100 ng/ml PDBu, or no phorbol ester. TPA expressed predominantly  $\alpha$  and  $\epsilon$  isoforms; PDBu-grown cells expressed  $\alpha$  and  $\beta$  isoforms. UVA caused a 2-fold increase in PKC- $\alpha$  and 2-fold decrease in PKC- $\epsilon$ . PUVA caused a decrease in PKC- $\alpha$ , and had no effect on PKC- $\epsilon$ . These data show that PKC isotypes in NHM are regulated by phorbol esters and support a role for PKC-isotope switching in UVA- and PUVA-dependent melanocyte functions.

**FA Anthony, HM Laboda, JC Dowdy and ME Costlow: 8-Methoxypsoralen forms Photoadducts with Cellular Phospholipids in Cultured Melanogenic Cells.** The authors studied 8-MOP covalent photobinding to lipids in cultured S-91 Cloudman melanoma cells and normal human melanocytes. Binding was selective for phospholipids, and partially competitive with excess 8-MOP. The authors suggest a possible role for phospholipids or their metabolites in the biological actions of PUVA.

**PV Bennett and BM Sutherland: Differential Response of Normal Human Melanocytes to Single and Multiple Exposures of UV Radiation.** Four strains were exposed to single or multiple doses of UVA or UVB. Strain 922 (lightly pigmented) is UV-sensitive; strain 923 (heavily pigmented) is moderately UV-sensitive; strain 926 (moderately pigmented) is UV-responsive and moderately sensitive; strain 928 (lightly pigmented) is highly UV-responsive, exhibits little cell killing and shows significant growth promotion after UV. In contrast to unirradiated melanocytes, UV-irradiated melanocytes grow as anchorage-independent colonies. These results indicate that melanocytes in culture are highly individual in their response to UV.

**MF Mutzhas: Reference Action Spectra for Ultraviolet-Induced erythema and Pigmentation for Different human Skin Types.** These reference spectra consist of three straight lines when displayed on a log-linear scale.

**G Sauermann and U Hoppe: Fluorescence-Free UV/VIS Reflection Spectra of Human Skin - Influence of Moisture Content, Washing, and Pigmentation.** Tape-stripping, which removes (pigmented) stratum corneum, raises reflectivity and lowers minimal erythema dose.

**M Boulton, JM Burke, W Korytowski, M Rozanowska and T Sarna: Photoreactivity of Melanin, and Lipofuscin form Retinal Pigment Epithelium.** Oxygen photo-uptake (esr) and hydrogen peroxide formation (oxidase electrode) were measured in retinal pigment epithelium from bovine and human eyes as well as in purified melanosomes and lipofuscin granules. Photoconsumption of  $O_2$  occurred in all preparations.  $H_2O_2$  was a major product of melanin aerobic photolysis, but not lipofuscin photolysis. Results suggest that both pigments may be potentially phototoxic to the eye.



**Z Malik, T Babushkina, M Shafran, Y Nordenberg, R Mamet and N Sheinfeld: Induction of Protoporphyrin Synthesis in B-16 Melanoma and Characterization of Photodynamic Activation.** Activation of the porphyrin synthesis pathway, exogenous supply of 5-ALA, and photolysis at 380 nm resulted in enhanced efficiency of photo-killing due to higher protoporphyrin levels.

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### **Positions - Wanted and Available :**

Available: Postdoctoral Fellowship: NIH-funded position (for up to 3 years) to study the biogenesis of the melanosome and genetic disorders which affect it. Prior training in either immunomicroscopy or molecular biology desirable. US citizen or permanent resident only. Contact: Dr. Seth Orlow, Dermatology Room H-100, NYU Medical Center, 550 First Avenue, New York, NY 10016. phone: 212/263-5070, FAX: 212/263-8752.

Available: Two postdoctoral positions are available to study the recently described receptors for the proopiomelanocortin peptides (Science, 257:1248, 1992). Ongoing projects include structure/function analysis of the MSH receptor, isolation and characterization of neural-specific proopiomelanocortin receptors, and study of the functions of melanocortins in the CNS. One position requires a background in peptide and protein chemistry for receptor structure/function analysis. The second position would ideally be filled by an individual with training in neurobiology and a strong background in molecular biology. Applicants should send a Curriculum Vitae, a statement of research interests, and three letters of recommendation to: Dr. Roger D Cone, Vollum Institute for Advanced Biomedical Research, Oregon Health Sciences University, 3181 SW Sam Jackson Park Road, Portland, OR 97201-3098. phone: 503/494-4732; FAX: 503/494-4534.

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### **Bibliography :**

The Bibliography published in this issue covers the period mid-May through mid-August, 1993. If you notice a paper that was not detected by this search that should be included, please send it to us and we will include it in the next issue. We have highlighted publications which include a member of the **PASPCR** with an asterisk.

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