PASPCR Newsletter

December 2001
Vol. 9 Number 4

www.paspcr.org

Introduction...

In this issue, I am making some changes to the ***PASPCR Newsletter***. Hopefully this new format will be easier to read. If there are any changes that you wish to see included, please contact me via email. All comments are appreciated. You can contact me at bill@lenti.med.umn.edu.

The ***PASPCR Newsletter*** is published quarterly and is intended to serve as a means of communication for the members of our Society. As such, we invite our membership to actively contribute to it. If you attend a scientific meeting and have heard results which you think will be of interest to the membersip of the **PASPCR**, please write a few paragraphs summarizing what was presented and share it with us. Any information on up-coming meetings of interest will also be included. We also want to note any change of affiliation or address that you may have had to help us keep our membership list up-to-date. 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 Bill Oetting, preferably by E-mail, to bill@lenti.med.umn.edu.

The PASPCR Web page is the major, up-to-date source of current information for the PASPCR membership. The URL address to our home page is **http://www.paspcr.org**. The PASPCR Web page contains information about the PASPCR including the goals, ByLaws and Rules of the Society, future meetings, past issues of the *PASPCR Newsletter* as well as links to other related sites including the InterPig DataBase, the International Federation of Pigment Cell Societies (IFPCS) and the regional Pigment Cell Societies from Europe and Japan. In addition, an updated PASPCR membership directory is available on the PASPCR Web page: please notify us if you wish any or all of your information to be modified or deleted on that site. The PASPCR home page also includes positions available and positions wanted. Postings for Positions Available are open to all individuals so long as the position is related to pigment cell research. Postings for Positions Wanted will be open to members of PASPCR or its sister societies (JSPCR and ESPCR). Please provide an expiration data for any submitted postings. If there is additional information that you wish to have added to and/or suggestions to the PASPCR WebMaster, contact Bill Oetting at bill@lenti.med.umn.edu.

In this Issue . . . . .

The PanAmerican Society for Pigment Cell Ressarch

C/O Dr. James J. Norlund
Department of Dermatology
University of Cincinnati
231 Bethesda Avenue
Cinceinnati, OH 45267-0592

Officers:

Richard King,
President
Zalfa Abdel-Malek
President-elect
James J. Lorlund
Secretary/ Treasurer

Council Members:

Mary K. Cullen
Meenhard Herlyn
Helene Z. Hill
Thomas J. Hornyak
Randy Morrison
Glynis Scott
Miri Seiberg
Vijay Setaluri
Giselle Thibaudeau

IFPCS Represenative:

Sally Frost-Mason

Calendar of Events:

Sept 9 - 13, 2002 The XVIIIth International Pigment Cell Conference, to be held in The Hague, Holland.
Contact: Dr. Stan Pavel, President ESPCR, University Hospital Leiden, Dept of Dermatology, PO Box 9600, NL - 2300 RC LEIDEN
Phone: 31-(71) 526 1952
Fax: 31-(71) 524 8106;
E-mail: SPavel@algemeen.azl.nl

Sept 3-7, 2003 XIth Annual Meeting of the PanAmerican Society for Pigment Cell Research, to be held in Wood's Hole, MA.

The *PASPCR Newsletter* is published quarterly by the PanAmerican Society for Pigment Cell Research. All views are those of the authors. For further information or to submit articles, please contact members of the Publications Committee.

Publications Committee:

William S. Oetting, PhD
University of Minnesota
Department of Medicine- Genetics
MMC 485
420 Delaware St. SE
(612) 624-1139
bill@lenti.med.umn.edu

Vijayasardhi, Setaluri, PhD
Wake Forest University School od Medicine
Department of Medicine
Winston-Salem, NC 27157
(336) 716-3273
setaluri@bgsm.edu

Giselle Thibaudeau, PhD
Mississippi State University
Department of Biological Sciences
Harned Hall
Mississippi State, MS 39762
(662) 325-7572
giselle@ra.msstate.edu

Corporate Sponsors
by James J Nordlund

The PASPCR would like to acknowledge and thank our Corporate Sponsors; the list below reflects contributions over the past 2 years. 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.

GOLD Corporate Patrons
Procter and Gamble Co
Shiseido Co, Ltd

SILVER Corporate Patrons
Avon Products, Inc
Galderma Laboratories, Inc
Stiefel Laboratories
Combe, Inc.

Animal Models
by Lynn Lamoreux

Let's talk pigs.

The well known but under utilized Sinclair Swine are characterized by a high incidence of melanomas that are present at birth or soon thereafter. In these pigs, the relationship between melanoma and vitiligo is potentially illuminating of both phenomena. If the melanoma stimulates accompanying vitiligo, then commonly the melanoma regresses over the course of the first few months of the pig's life, and the vitiligo progresses to the eventual destruction of most of the skin pigmentation so that the black pigs become white by the time they are a year or two old. Interestingly, pheomelanic piglets rarely are born with the melanoma, if they are, the melanomas quickly regress, and also these pheomelanic pigs do not exhibit vitiligo.

Work with these pigs suggests three genetic loci share major responsibility for the formation of the melanoma.

The only large herd of Sinclair swine is housed at Texas A&M University, where it has most recently been used to map genes related to melanoma incidence. And of course has also been used by our member John Pawelek to test some of his esoteric theories relevant to melanoma. Many of you had a chance to admire these pigs while attending the PASPCR meeting in College Station.

The Sinclair pig is one of our best models for both melanoma and vitiligo, and the Texas A&M colony is threatened with extinction.

SUGGESTION: You-all in the vitiligo group (including especially those in the photo on page 4), how about you get together with folks in the melanoma interest group and think about the implications of loss of this model and possible ways to save it.

HINT: Several litters of pigs have now been successfully cloned using cultured fibroblasts as the donor cells. Cloning of pigs is therefore demonstrated to be consistently doable. About 100 of these Sinclair pigs remain. How difficult would it be to preserve 100 cultures of fibroblast cells and store them in three or four widely separated repositories for possible future use. Better than letting the model just fade away, right? Or would it be easier to take the pigs, for example, to Arkansas?

Members of the vitiligo group at the X[th] annual meeting of the PASPCR in Minneapolis, MN, 2001. From left to right: Rangaprasad Sarangarajan, Roger Bowers, Carolyn LePoole, Gisela Erf, Pran Das, Wayne McCormack and Xiaoli Wang.

REFERENCES:

Review:

1. Spontaneous Regression of Sinclair Swine Cutaneous Malignant Melanoma. Amoss, MS, Fadok, VA, Multani, AS, Pathak, S, Greene, JF, Jr., Measel, JW, Jr., Morgan, CD. In "Advances in Swine Biomedical Research eds: Tumbleson and Schook Plenum Press, NY 1996.

Editorial:

1. What is Inherited in Neoplastic systems? Animal Models of Cutaneous malignant Melanoma. Clark, WH, Jr., Laboratory Investigation 71:1, 1994

Manuscripts:

1. Histopathology of Regression in Sinclair Swine Model of Melanoma. Greene, JF, Jr., Townsend, JS, IV, Amoss, MS, Jr. Laboratory Investigation 71:17, 1994.

2. Regression by Differentiation in the Sinclair Swine Model of Cutaneous Melanoma. Greene, JF, Jr., Morgan, CD, Rao, Amoss, MS, Jr., Arguello, F. Melanoma Research 7:471, 1997.

3. Genetic Determinants of Cutaneous malignant Melanoma in Sinclair Swine. Blangero, J, Tissot, RG, Beattie, Amoss, MS, Jr. British Journal of Cancer 73:667, 1996.

4. Genetic Predisposition and Specific Chromosomal Defects Associated with Sinclair Swine Malignant Melanomas, Pathak, S, Amoss< MS, Jr. International Journal of Oncology 11:53, 1997.

5. Spontaneous Regression of Cutaneous Melanomas in Sinclair Swine is Associated with Defective Telomerase Activity and Extensive Telomere Erosion. Pathak, S, Multani, AS, McConkey DJ, Amoss, MS, Jr. International Journal of Oncology 17:1219, 2000.

6. Immunophenotypic Characterization of Tumor Infiltrating Lymphocytes and peripheral Blood Lymphocytes Isolated from Melanomatous and non-Melanomatous Sinclair Miniature Swine. Morgan, CD, Measel, JW, Jr., Amoss, MS, Jr., Rao, A, Greene, JF, Jr. Veterinary Immunology and Immunopathology 55:189, 1996.

7. Cycloheximide-induced Apoptosis in Melanoma Cells Derived from Regressing Cutaneous Tumors of Sinclair Swine. Gossett, R, Kier, AB, Schroeder, F, McConkey, D, Fadok, V, Amoss, MS,Jr. Journal of Comparative Pathology 115:353, 1996.

From the Editor
Vince Hearing

Dear Members of the ESPCR, JSPCR and PASPCR :

It has now been 2 years since I began my 5 year term as Editor of Pigment Cell Research and I would like to take this occasion to thank you for the tremendous support that has been given to me on every level. The quality of submissions has improved, the speed and quality of reviewers has improved, the support by the publisher has improved and in my opinion, the journal has become a much more vital resource for all of us as a result. The Journal is widespread in its coverage and it welcomes potential authors from the more peripheral areas of research in pigmentation ranging from comparative biology to chemistry to clinical and applied aspects. The outlook for 2002 and beyond is quite bright and I have summarized below some key points regarding that. I'll look forward to the remaining 3 years of my term confident that our journal will continue to progress significantly in the future. Best regards, /s/ Vince Hearing, Editor, Pigment Cell Research (email: editor@pigment.org).

- Web Site – The PCR Web site (www.pigment.org) is being used more and more frequently with more than 10,000 hits in its first 2 years; not only can you access titles and abstracts of all Volumes of papers back through the years, but abstracts and titles of papers now in press can also be accessed. The P*C*R Primer is sent to more than 700 scientists in the field that are in our database – if you don't get that you can sign up from the PCR Web site to receive information about journal publications as they come out.
- Online Submissions – Speed is the key, and manuscripts can now be submitted online beginning in 2002. See the 'Authors' page on the Web site for information about this and what types of files can be submitted.
- Turnaround Time – Electronic processing has also sped up handling of your submissions; the average time to a decision from the date my office received a manuscript in 2001 was only 24 days; the average total time in my office for accepted manuscripts from receipt to transmission to the Publisher was only 31 days.
- Impact Factor – The Impact Factor for PCR rose for a 3rd straight year (to 1.87) in 2001; we will surely break the 2.00 barrier next year, particularly if you take care to cite relevant reviews and research papers in PCR that were published in 2000 and 2001.
- Circulation – rose again for the second straight year by about 15%; the Publisher has acknowledged this by increasing our color and page budget (cf below), but we can do a lot better if Institutional subscriptions are increased.
- Color increase – the Publisher has doubled our color publication budget for 2002; it is not yet an unlimited amount, but you should notice a further increase in color next year.
- Page increase – the Publisher has added 96 pages to our standard printing budget next year; this will allow for timely publication of the increased number of excellent reviews and research articles that are being submitted.
- Outstanding Reviews – once again, virtually everyone asked to contribute a review next year has agreed to do so. You can look at the upcoming list of Reviews (Regular, Gene Focus and Innovative Technology) on the 'Forthcoming' page of the Web Site.

Three things you can do to help – (1) submit your quality papers to PCR, (2) make sure your Institution's Library subscribes to PCR, and (3) cite relevant recent PCR articles in your own publications next year. It's that easy.

Members in the News

In November of this year, Joe Bagnara was given an award by the Japanese Government, after which there was an audience with the Emperor himself. We congradulate Joe on this important and well deserved award. Here are two accounts of the award ceremony, one by Jiro Matsumoto, member of the Japanese Society of Pigment Cell Research (JSPCR) and another by Joe.

From Jiro Matsumoto

Dr. Joseph T. Bagnara, Professor Emeritus of the University of Arizona, was decorated with the Order of the Sacred Treasure, Gold Rays with Neck Ribbon, from the Japanese Government for his dedication to the fostering of Japanese biologists in fields of pigment cell biology, developmental biology and comparative endocrinology. The awarding ceremony, attended by himself and his wife Mary Louise, was held in November 9, 2001 in the National Theater in Tokyo. At the end of the ceremony, all the awardees were celebrated by the Emperor in the Imperial Palace. The system of decoration in Japan was established in 1875 to express her appreciation to those who contributed to the nation's activities.

From Joe Bagnara

On October 31, 2001, I learned from a Japanese colleague that I was to receive a decoration from the Japanese government and that the official list of awardees would be released to the Japanese news media, newspapers and television, on November 3, 2001, the National Day of Culture. My decoration, Order of the Sacred Treasure, Gold Rays with Neck Ribbon, was to be awarded by the Ministry of Education, Science and Culture at a ceremony to be held at has not yet achieved wide recognition in Japan, my nomination was given additional support by Prof. Sakai Kikuyama, President of the Japanese Society for Comparative Endocrinology, and by Prof. Hiroyuki Ide, Secretary of the Japanese Society for Developmental Biology. The nomination was based upon my long research collaboration with Japanese scientists, my support of seven Japanese post-doctoral fellows in my laboratory between 1963 and 1991, my contributions to the growth of pigment cell research in Japan, and my own personal scientific record. In the first step of the screening process, the ministry verifies the contribution of the nominee to Japan. In the second step, the Office of Foreign Affairs checks into the academic status of the nominee in his home country. The third step is the correlation of the above information and the making of the final decision by the Cabinet Secretary's office. While there were a few non-Japanese awardees, according to a listing in the newspaper, I saw no others at the ceremony.

In a very precise process at the awards ceremony, I received a scroll declaring the conferring of the decoration, Order of the Sacred Treasure, Gold Rays with Neck Ribbon, and the decoration itself, presented in a beautiful black lacquer box. The decoration consists of a medallion in the form of four sets of five rays at the cardinal points radiating from a circle of red gems. The medallion is suspended by a silver and gold silk moire ribbon. Among the various documents I received, all written in Japanese, was a sheet in English describing how the decoration is to be worn in public. Altogether, the award ceremony, the audience with the Emperor, and the looks of joy, pride and pleasure on the faces of my Japanese friends, and on that of my wife, were a fabulous experience that is hard to describe.

Keep the membership informed.

If you have news about a member of the PASPCR, please let us know. Contact a member of the publications committee and we will make sure that it is in the next issue.

And now for the rest of the story.

Speaking of Joe, in a bit of serendipity, this issues' higlighted member is Joe Bagnara. I have always wondered how someone living in a desert can get involved with frogs. So, I went to the source and asked how Joe got started in his research. Here is his story.

Sins of Omission
by Joe Bagnara

In response to my query of why the trail we were on was so crooked, my old hiking buddy and trail mentor, Charlie Thornton, said, "This was an old miner's trail and they made it by releasing their burros and then following them." And, so it has been with my own career in research, a series of tortuous peregrinations.

In high school I felt, in keeping with my inclinations toward natural history, that I would become a simple forest ranger who stayed in the woods all day and returned at night to a comfortable family. However, as an undergraduate student at the University of Rochester, I came under the spell of experimental embryology as practiced by Professor Johannes Holtfreter and his students who took me under their respective wings. Biochemistry and Morphogenesis by Joseph Needham and Principles of Development by Paul B. Weiss became my bibles and so, off I went to pursue graduate work at the University of Iowa under the direction of the eminent embryologist/endocrinologist Professor Emil Witschi. I did so ignoring the admonitions of Professor Donald Charles, Head of the Biology Department at the University of Rochester who felt that a heavy football player, such as myself, should not contemplate a career that would entail the delicate manipulation of amphibian embryos. An admonition also came from my father, an Italian immigrant whose knowledge of American geography was limited. He warned me to take great care of myself among those cowboys in Iowa!

In retrospect, in the Fall of 1952, I never would have thought that I was starting a career that would for almost 50 years entail the study of pigment cells or chromatophores and especially those of amphibians. Moreover, I would never have dreamed that I would pursue these esoteric studies for all these years at the University of Arizona in the arid southwest. But, destiny will have its way and as a consequence of observations I made on the hundreds of hypophysectomized leopard frog tadpoles that I produced for my mentor at Iowa, I discovered that the bright colored chromatophores, notably iridophores, of these tadpoles were under the control of MSH. In the process, while working on hypophysectomized *Xenopus* tadpoles, I discovered the tail-darkening reaction of these larvae and went on to show that melanophores in the tail fin were directly sensitive to light and, moreover, that temporal responses in light and darkness suggested the presence of visual pigments in these cells. My first sin of omission was a failure to confirm this hypothesis by further study; instead, I focused on the MSH control of iridophores and xanthophores. (Fortunately, some 40 years later, Mark Rollag demonstrated the presence of visual pigments in these light sensitive melanophores and thus I was vindicated.) By this time I had accepted a position at the University of Arizona (jobs were scarce in 1956). Fortunately, I found that the Sonoran desert was not a wasteland and that instead its flora and fauna were rich. There was even

a large array of amphibians, including *Ranachiricahuensis* which, as my student Phil Fernandez showed in his Ph.D. work, is capable of remarkable color changes, for a variety of reasons, under the influence of MSH. This frog and a sibling species, *R. yavapaiensis*, are often found in beautiful canyon streams lined with tall trees that include walnut, sycamore, ash, and willow. It became a treat to look for these frogs and to collect their eggs in the Spring. These streams were also the home of the beautiful canyon tree frog whose fascinating iridophores and xanthophores figured prominently in our work.

During my early years at Arizona, while explaining the tail-darkening reaction of *Xenopus* tadpoles to a class, I suddenly realized that the body-blanching reaction, which occurs at the same time, might result from the release of melatonin (at that time just elucidated by Aaron Lerner) from the pineal. Indeed, experiments that I performed and described in1960 showed that this was actually the case. Here, I became guilty of my second major sin of omission by not following up on this work. I did do some additional studies on the pineal and pigmentation, but in essence I let the bandwagon go by without me as I instead was drawn away by a new-found interest in pteridines and yellow pigment cells.

I had learned a little about pteridines in my early years at Arizona, but it was a visit in 1961 to the laboratory of Professor Tadao Hama of Keio University in Yokohama that really whet my interest and enhanced my knowledge. Here, Masataka Obika and Jiro Matsumoto were doing their dissertation research. Obika in Japan and I in Tucson had discovered independently, that pteridines were the principal pigments of yellow (and red) pigment cells and Matsumoto subsequently demonstrated through the use of differential centrifugation, that these pigments resided in an organelle that he named, the pterinosome. Both subsequently came to work with me in Tucson. When Obika arrived in 1963, the television program "Gunsmoke" was very popular and Matt Dillon was the hero. And so, Masataka became Matt to everyone in the lab and Obika really took to his new name; however, he used the Japanese spelling of Mat and thus he has been called for all these years. Mat stayed in our lab for two years and Jiro who followed two years later stayed for a shorter period. Both made great contributions to our work on pteridines and bright pigmentation. However, I soon succumbed to new distractions and other new topics gained sway. Among these was the comparative biology of the "dermal chromatophore unit" that we described when Mac Hadley and John Taylor were in my laboratory. This work revealed many new side issues which I conveniently omitted from my priorities for investigation. I did pursue one discovery made by John Taylor and me that became important. I refer to the giant melanosome of adult leaf frogs (*Phyllomedusinae*) which is unique in containing a core of eumelanin surrounded by a concentric mass of the pteridine dimer, pterorhodin. Identification of this unusual pteridine was the result of my collaboration with Peppe Prota and his late wife, Giovanna Misuraca. The unusual compound organelle derives from "normal" larval melanosomes that transform to the adult compound melanosome at metamorphosis. Notwithstanding the efforts made by my student, Sally Frost, who worked on aspects of the pterorhodin problem for her dissertation, we have never been able to

explain how this transformation takes place, nor have we been able to comprehend its hormonal control. In part, this failure was due to new distractions that led to a theme that has been a major one for me. Namely, the concept that all pigment cells derive from a common stem cell of neural crest origin and that their respective individual paths of differentiation occur in response to cues present in the tissue environment. This theme became the major one in my laboratory for more than 20 years and as we proceeded forward, many interesting side projects were commenced and left in the wake. These, I suppose, were also sins of omission, but by this time I had matured enough as a scientist to properly assess priorities and as our ultimate target of priority, my lab focused on the elucidation of putative factors that may impinge upon chromatoblasts and thus be responsible for specific pigmentation patterns. In particular, we followed up the discovery of my academic grandson, Toshihiko Fukuzawa (the Ph.D. student of my former post-doc, Hiroyuki Ide) that there is present in ventral frog skin, a factor which inhibits the development of melanoblasts and thus accounts for their dark dorsal and light ventral pigmentation. We were well underway toward purifying and isolating this putative melanization inhibiting factor (MIF) when it became time for Toshi to return to Japan. At the same time, I felt it was time for me to retire formally. I did retain my laboratory and, in part, I still come in to the lab several times a week; however, I have given up my own specific pursuit toward the elucidation of MIF. Instead, I have left this task in the hands of others of my academic family. J Newton, my last Ph.D. student, approached the problem from the aspect of molecular genetics in the laboratory of Greg Barsh; however, this approach was aborted since it was not a feasible dissertation subject. So, its resolution remains in the hands of Toshi Fukuzawa and I leave it as just another one of my many sins of omission.

Perhaps I am being a little hard on myself and even if this is the case, I take solace in having had a wonderful career marked by my interaction with many magnificent people, some not mentioned here, who comprise the list of my former students, associates and colleagues who played such an important part in the success that we have had. You are all my academic family and I am gratefully in touch with most of you. Many of you have beautiful children and you are kind enough to share their joys with me. Many of my former associates reside in different parts of the world and we retain an affectionate friendship. This was particularly manifested in recent weeks when, following the tragedy of September 11, 2001, I had wonderful words of kindness from many of you.

This section of the PASPCR Newsletter, 'and now for the rest of the story' is an opportunity for members of the PASPCR research community to find out some of the background information and detainls oncertain research acrivitiesthat usually do not make it into the publications.

If you wish to know how a particular line of investigation got started, or know of a story that would be interesting to readers of the PASPCR Newsletter, please email me at bill@lenti.med.umn.edu, and I will try to get **the rest of the story**.

Mouse News

by Lynn Lamaroux

We are very pleased to announce that the congenic colony of mouse pigment mutants that is housed at Texas A&M University has been temporarily funded for three primary purposes:

1. To use these congenic mutants to make congenic pigment cell lines as appropriate;

2. To cryopreserve these important stocks so they will not again be threatened with extinction; and

3. To make them available to the community of pigment cell researchers and to the many scientists in other fields who share interest in our mutants.

This funding was obtained (in alphabetical order) by:
Dr. Dorothy Bennett, Professor, St. George Hospital Medical School Dr. Rick Ermel, Associate Professor, Texas A&M University Dr. M. Lynn Lamoreux, Visiting Research Scientist, Texas A&M University Dr. Jim Womack, NAS, Professor, Texas A&M University

The mouse colony emphasizes loci that drive the major functions of the pigment system, as follows:

1. Cell survival - the white-spotting loci are broadly represented. We hold a number of alleles at the MITF locus.

2. Melanogenesis - the loci that function in melanogenesis and are implicated in albinism, including tyr, trp-1, trp-2

3. Pheomelanin/eumelanin - representative alleles at the agouti locus, the Mcr1 locus, and modifying loci.

4. And varous other mutant pigment loci.

Alleles are held congenic with the inbred strain, C57BL/6J. Thus it is possible to make mice that contain one mutant or multiple mutant loci, all expressed within a controlled, uniform genetic background. This fact makes our stocks readily available to study the functions of individual gene loci, or to study the ways in which pigment loci (or their products/functions)

INTERACT with each other and with their environment within the organism to form the intraorganismal web of life. Some alleles are also available on another inbred strain where they are expressed differently (in terms of mouse phenotype).

If you want to discuss these mutant mice or cell lines please contact Lynn Lamoreux (mllamoreux@hotmail.com) or Dot Bennett (dbennett@sghms.ac.uk).

The web site for the mice is: http://www.sghms.ac.uk/depts/anatomy/pages/WTFGMPMR.htm

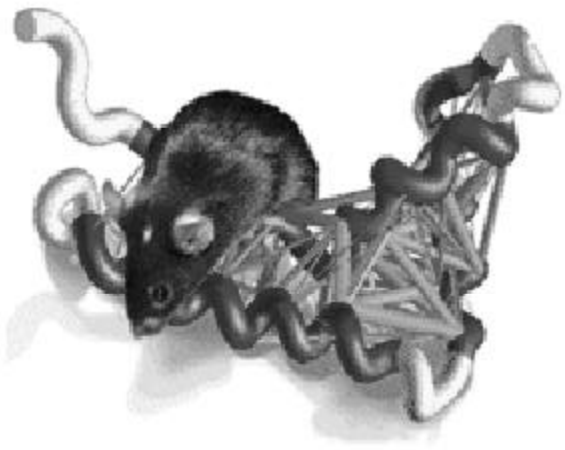

Image from Bill Pavan, N.I.H.

Melanoma Research News
by Meenhard Herlyn

Dear Colleagues,

I hope you had a successful 2001 and I wish you all the best for the Holidays and the New Year.

Let me briefly update you on our long-term quest to stimulate the melanoma research field. Originally we had hoped to organize collaborations within our group, but then concluded that the initiative has to come from the individual researchers. We shifted our priorities to bringing the community more often together for updates and discussions. Out of these meetings we expect that new opportunities for collaborations arise. We have increased communications with few small workshops but we have to also bring all members from the research field community together, including trainees and newcomers.

I am happy to report that we have now secured support and begin the preparation for the

First Annual Melanoma Research Congress

It will be held in Philadelphia in November 2002, likely between the 17th and 20th for two full and two half days. Support will come from the Foundation for Melanoma Research (FMR), a melanoma patients' advocacy group based in Philadelphia. The local cable company Comcast will be a major underwriter. Support is also expected from other advocacy groups, particularly the Melanoma Research Foundation (MRF) and from the NCI.
We expect the congress to be held annually and the meeting will be open to all interested in the field. My colleague DuPont Guerry from the University of Pennsylvania and I will organize this first congress. We are both members of the Board of FMR.

To foster communication and to establish a community spirit among all interested in melanoma research, the

Melanoma Research Society

will be established in the next year. A major purpose for the Society will be to organize annual meetings, increase communications among researchers, be a voice for the research community at the federal government levels and cooperate with melanoma patients' advocacy groups. This international society will draw support from its active members. We hope that advocacy groups will help us in our efforts.

Few additional notes:

The International Pigment Cell Society holds its congress next year from Sept. 9-13 in the Netherlands. Our Dutch colleagues will organize a satellite meeting on melanoma either before or after the main meeting. You will get more information from them soon.

If you want to receive updates on melanoma from the scientific literature, contact Rick Wilson from MRF at: growbot@home.com. Rick is a research news wizard and he will put you on his mailing list.

With best regards and a Happy New Year.

Yours,

Meenhard

International Federation of Pigment Cell Societies

Officers: Shosuke Ito (JSPCR, *President*); Stan Pavel (ESPCR, *Vice-President*); Richard A. King (PASPCR, *Secretary/Treasurer*)

Council Members: Zalfa Abdel-Malek (PASPCR); Dorothy C. Bennett (ESPCR); José C. García-Borrón (ESPCR); Masako Mizoguchi (JSPCR); James J. Nordlund (PASPCR); Shigeki Shibahara (JSPCR); Vincent J. Hearing (*Ex Officio* member as the Editor of Pigment Cell Research) and Stan Pavel (*Ex Officio* member as Organizer of the 18th IPCC)

A Letter from the IFPCS President to the members of three Regional Pigment Cell Societies

It is sad to remember the year 2001, the beginning of the 21th century, as the year of threats to peace in the world. I do believe that humans will eventually solve these difficult problems with their wisdom. When we talk about progress, however, I think that the past year has been remarkable one for pigment cell biologists. Scientists have made incredible advances in many areas of pigment cell biology, and these are now being disseminated to broader fields of biology and medicine. As the President of the IFPCS, I am glad that the annual meetings of the ESPCR (in Rome), the PASPCR (in Minneapolis), and the JSPCR (in Sendai) were successful and covered a broad range of topics in the pigment biology. I wish to congratulate the Chairs of those meetings: Drs. Mauro Picardo, Richard A. King, and Shigeki Shibahara for their successful meetings.

The IFPCS Council has established the following goals for the Federation (also available on the **IFPCS Web page** at **http://www.cbc.umn.edu/ifpcs)**:

1.To encourage the dissemination of knowledge related to pigment cells by the establishment, sponsorship and support for the publication of books, bulletins, newsletter, journal, reports or other means.

2.To organize a tri-annual international meeting, to honor outstanding contributions in the field by awarding the Myron Gordon award at that meeting, and to select a scientist who has made recent and significant advances in the field to present the Seiji Memorial lecture.

3.To foster and enhance research on pigment cells and pigmentation among the regional Societies and to foster scientific collaboration, cooperation and communication among the regional Societies.

The first goal was achieved with the IFPCS becoming an official sponsor of ***Pigment Cell Research*** (**http://www.pigment.org**). The journal is now in the 15th year of publication and Dr. Vincent J. Hearing should be congratulated for his success in increasing the reputation of the journal in the last 2 years. I also want to thank Johnson & Johnson, L'Oreal, Shiseido, and Unilever for their generous support of the journal. This support has helped Dr. Hearing expand the color figures and other aspects of ***Pigment Cell Research***, and all regional society members are grateful for this continued corporate support. To further promote the growth of the journal, the numbers of subscribers and submitted papers need to be increased. I urge all members of the Regional Societies to subscribe to ***Pigment Cell Research,*** to encourage your Institution's library to subscribe, to submit papers, and to cite PCR's pertinent references in your publications. For more details, please look at the accompanying message from the Editor.

The second goal may be the most visible among the several efforts of the IFPCS. The ***International Pigment Cell Conference (IPCC)*** has been held every three years since 1946 when Dr. Myron Gordon held the first meeting in New York. Since the inauguration of the IFPCS in Kobe in 1990, the IFPCS with one of the regional Societies have co-organized the IPCC on a rotating basis among the ESPCR, PASPCR, and JSPCR. The 15th IPCC was held in London in 1993, the 16th IPCC in Anaheim in 1996, and the 17th IPCC in Nagoya in 1999. The 18th IPCC, will be held on September 9-13, 2002, in the Netherlands with Dr. Stan Pavel as Organizer. The meeting will be held at the Hotel Zuiderduin in Egmond aan Zee, originally a fisherman village in the north part of the Netherlands, only 30 km from Amsterdam. The hotel has excellent facilities including indoor swimming

pool, sauna and squash, and is surrounded by fine restaurants and gift shops, and the IPCC will be the only occupants of the hotel during the meeting. The International Program Committee is completing plans for the scientific program and you will receive the second announcement/call for abstracts in February. I urge each of you to plan to attend this exciting and stimulating Conference and to present your new findings. Please note that the deadline for submission of abstracts will be May 1, 2002.

The 19th IPCC in 2005 will be organized by the PASPCR. I am happy to inform you that the IFPCS Council at its recent meeting in Sendai, Japan approved the plans of Dr. Vincent J. Hearing to organize the 19th IPCC at NIH on September 18-23, 2005. The theme of this meeting will be human pigmentary diseases and this should be another opportunity for an outstanding international meeting.

The third goal is being achieved through several activities including the establishment of the ***IFPCS Visiting Scientist Award Program***. The grants from corporate support, established in 1997, are intended to allow investigators from one of the regional Societies to visit the laboratory of an investigator in another regional Society to learn specialized techniques and/ or to establish inter-Society collaborations. This program has been supported by Beiersdorf, Clairol, Johnson and Johnson, Kanebo, L'Oreal, Shiseido, Nihon Surfactant, Procter and Gamble, Sunstar, Taisho, and Unilever, and has been quite successful. In 2001 Dr. Nico Smit of Leiden University, the Netherlands, was supported to visit Dr. Patrick A. Riley's laboratory in London and Dr. Olga Solovieva of Institut Curie, France, visited Dr. Takahiro Kunisada's laboratory at Gifu University, Japan. We hope to continue this program with a renewal of corporate contributions.

Another initiative for achieving this goal was the establishment of a standing committee of the IFPCS to maintain awareness of the animal resources used by members. Specific duties of this committee, chaired by Dr. Lynn Lamoreux, include an annual survey of animals of values to pigment cell research, a means of identifying threatened animal colonies, and the development of solution for problems with research animals. You should hear more about this new committee in 2002.

I sincerely hope that we will see healthy and steady progress in our 3 regional Pigment Cell Societies, ESPCR, JSPCR, and PASPCR in 2002. I wish to welcome new faces to the IFPCS Council: Dr. Zalfa Abdel-Malek (new President of the PASPCR). Finally, I urge each of you to contribute to your Society in any way you can: submitting your abstracts to the next IPCC, publishing your papers in ***Pigment Cell Research***, collaborating with other members, and recruiting others scientists and clinicians to join us. Let me take this opportunity to wish each of you and your colleagues a peaceful and successful year 2002.

Shosuke Ito
President, IFPCS

Positions - Wanted and Available

Postdoctoral Position

Polarized Kit-ligand expression in the epidermis: Its role in human melanocyte homeostasis

A postdoctoral position (fully funded for the first year with the possibility of a 2 year extension) is immediately available in the Department of Pathology, Centre Medical Universitaire at the University of Geneva, Switzerland. The project is supervised by Dr. Bernhard Wehrle-Haller and Prof. Beat Imhof and is within the frame of a collaboration between the University of Geneva and Industry.

The aim of this project is to understand the role of kit-ligand in melanocyte homeostasis in the adult epidermis and how manipulation of kit-ligand expression or localization in keratinocytes affect melanocyte behavior. The project will employ cell-biological, pharmaceutical, biochemical as well transgenic approaches (mouse) to develop methods to modify Kit-ligand localization (polarity and cell surface expression) in vivo and to study melanocyte behavior in response to such altered Kit-ligand presentation. For references and rational see Wehrle-Haller and Imhof (2001, J. Biol. Chem. 276, 12667-74) and Grichnik et al., (1998, J. Invest. Dermatol. 111, 233-38).

The Centre Medical Universitaire provides a stimulatory research environment located within the City of Geneva. Research in the department is centered around problems of autoimmunity, wound healing, inflammation, cell-cell junctions and cell migration. Geneva, located at the lake of Geneva in close proximity to the French Alps, provides a rich multicultural environment facilitating social integration.

Interested candidates preferably having experience in one or more of the aforementioned domains should send their CV (e.g. e-mail) including names and contacting information of two references to:

Bernhard Wehrle-Haller PhD
Department of Pathology
Centre Medical Universitaire
1. Rue Michel-Servet
1211 Geneva 4
Switzerland
Tel/Fax: 0041 22 702 5735 / 5746
Bernhard.Wehrle
Haller@medecine.unige.ch

Postdoctoral Research Position

A postdoctoral position is available immediately to study the transcriptional co-repressor and co-activator activities of the oncogenic protein Ski in human melanomas (PNAS (USA) 97:5924-5929, 2000). Seeking individuals with experience in EMSA, *in vitro* transcription-translation, site-directed mutagenesis and yeast two-hybrid screening. Interested individuals should send inquiries and applications (including CV, a brief description of past experience and future research interests, and the name of three references) to:

Estela E. Medrano, Ph.D.
Huffington Center on Aging
Baylor College of Medicine
One Baylor Plaza N-803.01
Houston, TX 77030

Baylor College of Medicine is an Equal Opportunity Employer

Research Associate/Post Doctoral Fellow Position Available

Position available for either an entry level postdoctoral fellow or a more senior research associate to study the molecular and cellular biology of the melanocyte in general and the pathophysiology of vitiligo in specific. The research project will focus globally on the role of survival factors and apoptotic regulators on the viability of melanocytes in the skin and in culture. In addition, the project will focus on the genetic and cellular susceptibility of melanocytes from patients with vitiligo to under apoptosis in response to various stimuli. Postdoctoral fellow candidate should have experience with routine molecular and cellular techniques including cell culturing, site directed mutagenesis, and protein biochemistry. Research Associate candidate should have similar experiences utilizing the melanocyte system. Candidate will become part of an interactive research group focusing of various aspects of pigmentation in the Department of Dermatology and on skin physiology in the Skin Sciences Institute within the University of Cincinnati College of Medicine. Send curriculum vitae and list of three references to:

Raymond E. Boissy, Ph.D.
Professor of Dermatology and Cell Biology, Neurobiology, & Anatomy
Department of Dermatology
University of Cincinnati College of Medicine
231 Albert Sabin Way, ML-0592
Cincinnati, OH, 45267-0592
TEL: 513-558-6242
FAX: 513-558-0198
E-mail: boissyre@email.uc.edu

Principal Scientist- Clinical Research - Skin Science Research

Unilever employs over 200 scientists at our New Jersey Laboratory who are dedicated to innovative and scientifically rigorous skin research programs. Our world sales exceed $40 billion so our programs have solid financial funding allowing for an innovative and challenging research culture. We currently have a full time opening that provides a unique opportunity to apply your basic science skills to human studies that impact the condition of skin for hundreds of millions people worldwide. We are seeking an expert in pigment biology or photobiology who can advance our knowledge and link laboratory research to clinically defined improvements of consumer skin problems. As a member of our skin research team, you will have an opportunity to work with other scientific experts in many fields including cell biology, biochemistry, measurement science and physical chemistry. You will also be encouraged to establish and maintain close ties to research in academic and government research communities.

We offer a competitive salary, benefits including tuition assistance and relocation, and a dynamic environment filled with learning and discovery beyond conventional scientific boundaries. Applicants must be authorized to work in the USA. For consideration please forward your CV to: Human Resources, Dept. CR-SID, Unilever Research US, 45 River Road, Edgewater, NJ 07020 or E-Mail: job.mca@unilever.com . Please place only the letters "CR-SID" as the subject of your e-mail. Unilever is an Equal Opportunity Employer m/f/d/v.

Postdoctoral Fellows - Cancer and Developmental Biology - Two NIH-funded positions are available for fellows interested in studying the Hedgehog signaling pathway in development and disease using skin as a model system. One project centers on defining the function of the Hedgehog pathway during skin appendage morphogenesis (Dev. Biol. 205: 1-9, 1999); a second project focuses on understanding how deregulated activation of this pathway gives rise to basal cell carcinomas (Nature Genet. 24: 216-7, 2000). Applicants should have a solid background in molecular and cell biology, with experience in transgenic animal models desirable but not required. Interested individuals should send a CV, letter of interest, and names of three references to: Dr. Andrzej Dlugosz, University of Michigan, Department of Dermatology and Comprehensive Cancer Center, 3310 CCGC, Box 0932, 1500 East Medical Center Drive, Ann Arbor, MI 48109-0932 Email: dlugosza@umich.edu. The University of Michigan is an Equal Opportunity Employer.

Postdoctoral Research Associate - Position available to study the biology of human inherited disorders of pigmentation using gene transfer technology. The successful applicant will have a Ph.D. and/or M.D. with experience in cell biology and molecular biology. Experience in gene transfer/genome manipulation is preferred. Please send curriculum vitae along with the names of three references to Dr. Richard King, Division of Genetics, Department of Medicine, Box 485 Mayo, 420 Delaware St. S.E., University of Minnesota, Minneapolis, MN 55455. Equal Opportunity Employer.

Bibliography:

The Bibliography published in this issue covers the period September, 2001 through November, 2001. 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. By its very nature, assignment of a reference to a particular category is arbitrary and we urge you to read through all categories to make sure you don't miss any pertinent to your field.

MELANINS, MELANOGENS & MELANOGENESIS

Alaluf S, Heath A, Carter N, Atkins D, Mahalingam H, Barrett K, Kolb R, Smit N: Variation in melanin content and composition in type V and VI photoexposed and photoprotected human skin: The dominant role of DHI. PIGM CELL RES 14:337-347 (2001).

Amaki SK, Oguchi Y, Ogata T, Suzuki T, Akeo K, Hiramitsu T: L-DOPA produced nitric oxide in the vitreous and caused greater vasodilation in the choroid and the ciliary body of melanotic rats than in those of amelanotic rats. PIGM CELL RES 14:256-263 (2001).

Claffey DJ, Ruth JA: Amphetamine adducts of melanin intermediates demonstrated by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry. CHEM RES TOXICOL 14:1339-1344 (2001).

Claffey DJ, Stout PR, Ruth JA: H-3-nicotine, H-3-flunitrazepam, and H-3-cocaine incorporation into melanin: A model for the examination of drug-melanin interactions. J ANAL TOXICOL 25:607-611 (2001).

Dincer Z, Jasani B, Haywood S, Mullins JE, Fuentealba IC: Metallothionein expression in canine and feline mammary and melanotic tumours. J COMP PATHOL 125:130-136 (2001).

Druzhyna MO, Burlaka AP, Sidorik EP: Application of fungus melanin for regulation of oxygen radicals generation under continuous exposure to low intensity ionizing radiation. EXP ONCOL 23:181-182 (2001).

Elleder M, Borovansky J: Autofluorescence of melanins induced by ultraviolet radiation and near ultraviolet light. A histochemical and biochemical study. HISTOCHEM J 33:273-281 (2001).

Endo K, Kamo K, Hosono K, Beppu T, Ueda K: Characterization of mutants defective in melanogenesis and a gene for tyrosinase of Streptomyces griseus. J ANTIBIOT 54:789-796 (2001).

Francke M, Makarov F, Kacza J, Seeger J, Wendt S, Gärtner U, Faude F , Wiedemann P, Reichenbach A: Retinal pigment epithelium melanin granules are phagocytozed by Muller glial cells in experimental retinal detachment. J NEUROCYTOL 30:131-136 (2001).

Gómez BL, Nosanchuk JD, Díez S, Youngchim S, Aisen P, Cano LE, Restrepo A, Casadevall A, Hamilton AJ : Detection of melanin-like pigments in the dimorphic fungal pathogen Paracoccidioides brasiliensis in vitro and during infection. INFEC IMMUNITY 69:5760-5767 (2001).

Ichikawa Y, Ohtani H, Miura I: The yellow mutation in the frog Rana rugosa: Pigment organelle deformities in the three types of chromatophore. PIGM CELL RES 14:283-288 (2001).

Johnson JK, Li J, Christensen BM: Cloning and characterization of a dopachrome conversion enzyme from the yellow fever mosquito, Aedes aegypti. INSECT BIOCHEM MOLEC BIOL 31:1125-1135 (2001).

Kowalczuk C, Priestner M, Baller C, Pearson A, Cridland N, Saunders R, Wakamatsu K, Ito S: Effect of increased intracellular melanin concentration on survival of human melanoma cells exposed to different wavelengths of UV radiation. INT J RADIAT BIOL 77:883-889 (2001).

Napolitano A, DiDonato P, Prota G: Zinc-catalyzed oxidation of 5-S-cysteinyldopa to 2,2'-bi(2H-1,4-benzothiazine): Tracking the biosynthetic pathway of trichochromes, the characteristic pigments of red hair. J ORG CHEM 66:6958-6966 (2001).

Okamoto S, Sakurada M, Kubo Y, Tsuji G, Fujii I, Ebizuka Y, Ono M, Nagasawa H, Sakuda S: Inhibitory effect of aflastatin A on melanin biosynthesis by Colletotrichum lagenarium. MICROBIOLOGY SGM 147:2623-2628 (2001).

Rosei MA: Opiomelanins synthesis and properties. HISTOL HISTOPATHOL 16:931-935 (2001).

Sharma AK, Kumar S, Sharma V, Nagpal A, Singh N, Tamboli I, Mani I, Raman G, Singh TP: Lactoferrin-melanin interaction and its possible implications in melanin polymerization: Crystal structure of the complex formed between mare lactoferrin and melanin monomers at 2.7-angstrom resolution. PROTEIN STRUCT FUNCT GENET 45:229-236 (2001).

Shimada M, Yamada Y, Itoh M, Yatagai T: Melanin and blood concentration in human skin studied by multiple regression analysis: experiments. PHYS MED BIOL 46:2385-2395 (2001).

Shimada M, Yamada Y, Itoh M, Yatagai T: Melanin and blood concentration in a human skin model studied by multiple regression analysis: assessment by Monte Carlo simulation. PHYS MED BIOL 46:2397-2406 (2001).

Strack D, Schliemann W: Bifunctional polyphenol oxidases: Novel functions in plant pigment biosynthesis. ANGEW CHEM INT ED 40:3791-+ (2001).

Tsai HF, Fujii I, Watanabe A, Wheeler AH, Chang YC, Yasuoka Y, Ebizuka Y, Kwon-Chung KJ: Pentaketide melanin biosynthesis in Aspergillus fumigatus requires chain-length shortening of a heptaketide precursor. J BIOL CHEM 276:29292-29298 (2001).

MELANOCYTES & KERATINOCYTES

Ameen M, Exarchou V, Chu AC: Topical calcipotriol as monotherapy and in combination with psoralen plus ultraviolet A in the treatment of vitiligo. BRIT J DERMATOL 145:476-479 (2001).

Bandyopadhyay D, Timchenko N, Suwa T, Hornsby PJ, Campisi J, Medrano EE: The human melanocyte: a model system to study the complexity of cellular aging and transformation in non-fibroblastic cells. EXP GERONTOL 36:1265-1275 (2001).

Basset-Séguin N, Soufir N: Melanocortin 1 receptor, skin cancers and pigmentation. M S MED SCI 17:1082-1083 (2001).

Bauer J, Metzler G, Rassner G, Garbe C, Blum A: Dermatoscopy turns histopathologist's attention to the suspicious area in melanocytic lesions. ARCH DERMATOL 137:1338-1340 (2001).

Bullani RR, Huard B, Viard-Leveugle I, Byers HR, Irmler M, Saurat JH, Tschopp J, French LE: Selective expression of FLIP in malignant melanocytic skin lesions. J INVEST DERMATOL 117:360-364 (2001).

Busam KJ, Charles C, Lee G, Halpern AC: Morphologic features of melanocytes, pigmented keratinocytes, and melanophages by in vivo confocal scanning laser microscopy. MODERN PATHOL 14:862-868 (2001).

Dai Y, Kato M, Takeda K, Kawamoto Y, Akhand AA, Hossain E, Suzuki H, Nakashima I: T-cell-immunity-based inhibitory effects of orally administered herbal medicine juzen-taiho-to on the growth of primarily developed melanocytic tumors in RET-transgenic mice. J INVEST DERMATOL 117:694-701 (2001).

deWinter S, Vink AA, Roza L, Pavel S: Solar-simulated skin adaptation and its effect on subsequent UV-induced epidermal DNA damage. J INVEST DERMATOL 117 :678-682 (2001).

DeLeeuw SM, Smit NPM, VanVeldhoven M, Pennings EM, Pavel S, Simons JWIM, Schothorst AA: Melanin content of cultured human melanocytes and UV-induced cytotoxicity. J PHOTOCHEM PHOTOBIOL B BIOL 61:106-113 (2001).

Duval C, Régnier M, Schmidt R: Distinct melanogenic response of human melanocytes in mono-culture, in co-culture with keratinocytes and in reconstructed epidermis, to UV exposure. PIGM CELL RES 14:348-355 (2001).

Gatlin J, Unett DJ, Lerner MR, Garcia JV: Efficient, long-term transgene expression in Xenopus laevis dermal melanophores. PIGM CELL RES 14:275-282 (2001).

Graeven U, Rodeck U, Karpinski S, Jost M, Philippou S, Schmiegel W: Modulation of angiogenesis and tumorigenicity of human melanocytic cells by vascular endothelial growth factor and basic fibroblast growth factor. CANCER RES 61:7282-7290 (2001).

Hedstrand H, Ekwall O, Olsson MJ, Landgren E, Kemp EH, Weetman AP, Perheentupa J, Husebye E, Gustafsson J, Betterle C, Kämpe O, Rorsman F: The transcription factors SOX9 and SOX10 are vitiligo autoantigens in autoimmune polyendocrine syndrome type I. J BIOL CHEM 276:35390-35395 (2001).

Jean S, DeMéo M, Sabatier AS, Laget M, Hubaud JC, Verrando P, Duménil G: Evaluation of sunscreen protection in human melanocytes exposed to UVA or UVB irradiation using the alkaline comet assay. PHOTOCHEM PHOTOBIOL 74:417-423 (2001).

Kemp EH, Waterman EA, Weetman AP: Autoimmune aspects of vitiligo. AUTOIMMUNITY 34:65-77 (2001).

Langley RGB, Rajadhyaksha M, Dwyer PJ, Sober AJ, Flotte TJ, Anderson RR: Confocal scanning laser microscopy of benign and malignant melanocytic skin lesions in vivo. J AMER ACAD DERMATOL 45:365-376 (2001).

Mackintosh JA: The antimicrobial properties of melanocytes, melanosomes and melanin and the evolution of black skin (vol 211, pg 101, 2001). J THEOR BIOL 212:128 (2001).

Meyskens FL, McNulty SE, Buckmeier JA, Tohidian NB, Spillane TJ, Kahlon RS, Gonzalez RI: Aberrant redox regulation in human metastatic melanoma cells compared to normal melanocytes. FREE RADICAL BIOL MED 31:799-808 (2001).

Minwalla L, Zhao Y, LePoole IC, Wickett RR, Boissy RE: Keratinocytes play a role in regulating distribution patterns of recipient melanosomes in vitro. J INVEST DERMATOL 117:341-347 (2001).

Miyashita Y, Moriya T, Yamada K, Kubota T, Shirakawa S, Fujii N, Asami K: The photoreceptor molecules in Xenopus tadpole tail fin, in which melanophores exist. ZOOL SCI 18:671-674 (2001).

Müllner-Eidenböck A, Moser E , Frisch H, Read AP: Waardenburg syndrome type 2 in a Turkish family: implications for the importance of the pattern of fundus pigmentation. BRIT J OPHTHALMOL 85:1384-1386 (2001).

Nagai K, Ichimiya M, Yokoyama K, Hamamoto Y, Muto M: Successful treatment of non-segmental vitiligo: Systemic therapy with sex hormone-thyroid powder mixture. HORMONE RES 54:316-317 (2000).

Ooka S, Kawa Y, Ito M, Soma Y, Mizoguchi M : Establishment and characterization of a mouse neural crest derived cell line (NCCmelan5). PIGM CELL RES 14:268-274 (2001).

O'Reilly FM, Brat DJ, McAlpine BE, Grossniklaus HE, Folpe AL, Arbiser JL: Microphthalmia transcription factor immunohistochemistry: A useful diagnostic marker in the diagnosis and detection of cutaneous melanoma, sentinel lymph node metastases, and extracutaneous melanocytic neoplasms. J AMER ACAD DERMATOL 45:414-419 (2001).

Oshima N: Direct reception of light by chromatophores of lower vertebrates. PIGM CELL RES 14:312-319 (2001).

Palermo B, Campanelli R, Garbelli S, Mantovani S, Lantelme E, Brazzelli V, Ardigó M, Borroni G, Martinetti M, Badulli C, Necker A, Giachino C: Specific cytotoxic T lymphocyte responses against Melan-A/MART1, tyrosinase and Gp100 in vitiligo by the use of major histocompatibility complex/peptide tetramers: the role of cellular immunity in the etiopathogenesis of vitiligo. J INVEST DERMATOL 117:326-332 (2001).

Pizzichetta MA, Talamini R, Piccolo D, Argenziano G, Pagnanelli G, Burgdorf T, Lombardi D, Trevisan G, Veronesi A, Carbone A, Soyer HP: The ABCD rule of dermatoscopy does not apply to small melanocytic skin lesions. ARCH DERMATOL 137:1376-1378 (2001).

Risbud M, Mojamdar M: A simple organ culture system for human fetal skin reveals that there are two phases in the melanocyte maturation in the dermis. IN VITRO CELL DEV BIOL ANIMAL 37:363-366 (2001).

Seiberg M: Keratinocyte-melanocyte interactions during melanosome transfer. PIGM CELL RES 14:236-242 (2001).

Sharara NA, Alexander RA, Luthert PJ, Hungerford JL, Cree IA: Differential immunoreactivity of melanocytic lesions of the conjunctiva. HISTOPATHOLOGY 39:426-431 (2001).

Shinoda K, Wada I, Jin HY, Jimbow K: A melanosome-associated monoclonal antibody J1 recognizes luminal membrane of prelysosomes common to biogenesis of melanosomes and lysosomes. CELL STRUCT FUNCT 26:169-177 (2001).

Smit NPM, Vink AA, Kolb RM, Steenwinkel MJST, vandenBerg PTM, vanNieuwpoort F, Roza L, Pavel S: Melanin offers protection against induction of cyclobutane pyrimidine dimers and 6-4 photoproducts by UVB in cultured human melanocytes. PHOTOCHEM PHOTOBIOL 74:424-430 (2001).

Smith-Thomas LC, Moustafa M, Dawson RA, Wagner M, Balafa C, Haycock JW, Krauss AHP, Woodward DF, MacNeil S: Cellular and hormonal regulation of pigmentation in human ocular melanocytes. PIGM CELL RES 14:298-309 (2001).

Stanganelli I, Bucchi L: Epidemiology of digital epiluminescence microscopy features of acquired melanocytic naevi. MELANOMA RES 11:483-489 (2001).

Tanaka M, Kinoshita M: Recent progress in the generation of transgenic medaka (Oryzias latipes). ZOOL SCI 18:615-622 (2001).

Uchida-Oka N, Sugimoto M: Norepinephrine induces apoptosis in skin melanophores by attenuating cAMP-PKA signals via a2-adrenoceptors in the medaka, Oryzias latipes. PIGM CELL RES 14:356-361 (2001).

vandenWijngaard R, Wankowicz-Kalinska A, Pals S, Weening J, Das P: Autoimmune melanocyte destruction in vitiligo. LAB INVEST 81 :1061-1067 (2001).

Virador V, Matsunaga N, Matsunaga J, Valencia J, Oldham RJ, Kameyama K, Peck GL, Ferrans VJ, Vieira WD , Abdel-Malek ZA, Hearing VJ: Production of melanocyte-specific antibodies to human melanosomal proteins: Expression patterns in normal human skin and in cutaneous pigmented lesions. PIGM CELL RES 14:289-297 (2001).

Wachsmuth RC, Gaut RM, Barrett JH, Saunders CL, Randerson-Moor JA, Eldridge A, Martin NG, Bishop T, Bishop JAN: Heritability and gene-environment interactions for melanocytic nevus density examined in a UK adolescent twin study. J INVEST DERMATOL 117:348-352 (2001).

Welch J, Millar D, Goldman A, Heenan P, Stark M, Eldon M, Clark S, Martin NG, Hayward NK: Lack of genetic and epigenetic changes in CDKN2A in melanocytic nevi. J INVEST DERMATOL 117:383-384 (2001).

MELANOMA & METASTASIS

Albert D, Syed N: Protocol for the examination of specimens from patients with uveal melanoma - A basis for checklists. ARCH PATHOL LAB MED 125:1177-1182 (2001).

Anastassiou G, Coupland SE, Stang A, Boeloeni R, Schilling H, Bornfeld N: Expression of Fas and Fas ligand in uveal melanoma: biological implication and prognostic value. J PATHOL 194 :466-472 (2001).

Augusseau-Caillot A, Soler C, Teyssier F, Perrot JL, Tiffet O, Cambazard F, Cuilleret J, Dumollard JM: Interest of PS100 assay when Tc-99m sestamibi scintigraphy failed to identify lymph node metastases of melanoma. EUROPEAN J DERMATOLOGY 11:432-435 (2001).

Auroy S, Avril MF, Chompret A, Pham D, Goldstein AM, Bianchi-Scarrá G, Frebourg T, Joly P, Spatz A, Rubino C, Demenais F, Bressac-dePaillerets B: Sporadic multiple primary melanoma cases: CDKN2A germline mutations with a founder effect. GENE CHROMOSOME CANCER 32:195-202 (2001).

Ayyoub M, Migliaccio M, Guillaume P, Liénard D, Cerottini JC, Romero P, Lévy F, Speiser DE, Valmori D: Lack of tumor recognition by hTERT peptide 540-548-specific CD8(+) T cells from melanoma patients reveals inefficient antigen processing. EUR J IMMUNOL 31:2642-2651 (2001).

Bafounta ML, Beauchet A, Aegerter P, Saiag P: Is dermoscopy (epiluminescence microscopy) useful for the diagnosis of melanoma? Results of a meta-analysis using techniques adapted to the evaluation of diagnostic tests. ARCH DERMATOL 137:1343-1350 (2001).

Bajetta E, DelVecchio M, Vitali M, Martinetti A, Ferrari L, Queirolo P, Sertoli MR, Cainelli T, Cellerino R, Cascinelli N: A feasibility study using polychemotherapy (cisplatin plus vindesine plus dacarbazine) plus interferon-alpha or monochemotherapy with dacarbazine plus interferon-alpha in metastatic melanoma. TUMORI 87:219-222 (2001).

Balázs M, Adám Z, Treszl A, Bégány A, Hunyadi J, Adány R: Chromosomal imbalances in primary and metastatic melanomas revealed by comparative genomic hybridization. CYTOMETRY 46:222-232 (2001).

Balch CM, Cascinelli N: The new melanoma staging system. TUMORI 87:S64-S68 (2001).

Banchereau J, Palucka AK, Dhodapkar M, Burkeholder S, Taquet N, Rolland A, Taquet S, Coquery S, Wittkowski KM, Bhardwaj N, Pineiro L , Steinman R, Fay J: Immune and clinical responses in patients with metastatic melanoma to CD34(+) progenitor-derived dendritic cell vaccine. CANCER RES 61:6451-6458 (2001).

Berd D, Sato T, Cohn H, Maguire HC, Mastrangelo MJ: Treatment of metastatic melanoma with autologous, hapten-modified melanoma vaccine: Regression of pulmonary metastases. INT J CANCER 94:531-539 (2001).

Béliveau A, Bérubé M, Carrier P, Mercier C, Guérin SL: Tumorigenicity of the mixed spindle-epithelioid SP6.5 and epithelioid TP17 uveal melanoma cell lines is differentially related to a5b1 integrin expression. INVEST OPHTHALMOL VISUAL SCI 42:3058-3065 (2001).

Biasco G, Pantaleo MA, Casadei S: Treatment of brain metastases of malignant melanoma with temozolomide. N ENGL J MED 345:621-622 (2001).

Blaheta HJ, Paul T, Sotlar K, Maczey E, Schittek B, Paul A, Moehrle M, Breuninger H, Bueltmann B, Rassner G, Garbe C: Detection of melanoma cells in sentinel lymph nodes, bone marrow and peripheral blood by a reverse transcription-polymerase chain reaction assay in patients with primary cutaneous melanoma: association with Breslow's tumour thickness. BRIT J DERMATOL 145:195-202 (2001).

Blessing K, Grant JJH, Sanders DSA, Kennedy MM, Husain A, Coburn P: Small cell melanoma - Reply. J CLIN PATHOL 54:655 (2001).

Bogdan I, Xin H, Burg G, Böni R: Heterogeneity of allelic deletions within melanoma metastases. MELANOMA RES 11:349-354 (2001).

Bono A, Maurichi A, Moglia D, Camerini T, Tragni G, Lualdi M, Bartoli C: Clinical and dermatoscopic diagnosis of early amelanotic melanoma. MELANOMA RES 11:491-494 (2001).

Bosserhoff AK, Echtenacher B, Hein R, Buettner R: Functional role of melanoma inhibitory activity in regulating invasion and metastasis of malignant melanoma cells in vivo. MELANOMA RES 11:417-421 (2001).

Box NF, Duffy DL, Chen W, Stark M, Martin NG, Sturm RA, Hayward NK: MC1R genotype modifies risk of melanoma in families segregating CDKN2A mutations. AMER J HUM GENET 69:765-773 (2001).

Bradbury J: Melanoma spread involves signals in cellular environment. LANCET 358:817 (2001).

Brem R, Hildebrandt T, Jarsch M, vanMuijen GNP, Weidle UH: Identification of metastasis-associated genes by transcriptional profiling of a metastasizing versus a non-metastasizing human melanoma cell line. ANTICANCER RES 21:1731-1740 (2001).

Brinckerhoff LH, Thompson LW, Slingluff CL: Melanoma vaccines (vol 12, pg 163, 2000). CURR OPIN ONCOL 13:413 (2001).

Cahill RA, McGreal G, Neary P, Redmond HP: Synchronous high-risk melanoma and lymphoid neoplasia. MELANOMA RES 11:517-522 (2001).

Calista D: Five cases of melanoma in HIV positive patients. EUROPEAN J DERMATOLOGY 11:446-449 (2001).

Cangul IT, VanGarderen E, vanderLinde-Sipman JS, vandenIngh TSGA, Schalken JA: Canine balloon and signet-ring cell melanomas: A histological and immunohistochemical characterization. J COMP PATHOL 125:166-173 (2001).

Cascinelli N, Belli F, Mackie RM, Santinami M, Bufalino R, Morabito A: Effect of long-term adjuvant therapy with interferon alpha-2a in patients with regional node metastases from cutaneous melanoma: a randomised trial. LANCET 358:866-869 (2001).

Cattel L, Buffa E, DeSimone M, Cesana P, Novello S, Dosio F, Ceruti M: Melphalan monitoring during hyperthermic perfusion of isolated limb for melanoma: Pharmacokinetic study and Tc-99m-albumin microcolloid technique. ANTICANCER RES 21:2243-2248 (2001).

Chakraborty AK, Sousa JD, Espreafico EM, Pawelek JM: Human monocyte X mouse melanoma fusion hybrids express human gene. GENE 275:103-106 (2001).

Chande M: A marker for melanoma? LANCET 358:565 (2001).

Chen Y, Kramer DL, Diegelman P, Vujcic S, Porter CW: Apoptotic signaling in polyamine analogue-treated SK-MEL-28 human melanoma cells. CANCER RES 61:6437-6444 (2001).

Connors J, Smoller B, Dinehart S: Sentinel node biopsy for melanoma: What is the evidence? ARCH DERMATOL 137:1228-1231 (2001).

Coulie PG, Karanikas V, Colau D, Lurquin C, Landry C, Marchand M, Dorval T, Brichard V, Boon T: A monoclonal cytolytic T-lymphocyte response observed in a melanoma patient vaccinated with a tumor-specific antigenic peptide encoded by gene MAGE-3. PROC NAT ACAD SCI USA 98:10290-10295 (2001).

Deffrennes V, Vedrenne J, Stolzenberg MC, Piskurich J, Barbieri G, Ting JP, Charron D, Alcaïde-Loridan C: Constitutive expression of MHC class II genes in melanoma cell lines results from the transcription of class II transactivator abnormally initiated from its B cell-specific promoter. J IMMUNOL 167:98-106 (2001).

Demirci H, Shields CL, Shields JA, Eagle RC, Honavar S: Ring melanoma of the anterior chamber angle: A report of fourteen cases. AMER J OPHTHALMOL 132:336-342 (2001).

desGrottes JM, Dumon JC, Body JJ: Hypercalcaemia of melanoma: incidence, pathogenesis and therapy with bisphosphonates. MELANOMA RES 11:477-482 (2001).

Dieckmann K, Bogner J, Georg D, Zehetmayer M, Kren G, Pötter R: A linac-based stereotactic irradiation technique of uveal melanoma. RADIOTHER ONCOL 61:49-56 (2001).

Diener-West M, Hawkins BS, Moy CS, Earle JD: Sociodemographic and clinical predictors of participation in two randomized trials: Findings from the collaborative ocular melanoma study COMS Report No. 7. CONTR CLIN TRIAL 22:526-537 (2001).

Dréau D, Foster M, Hogg M, Swiggett J, Holder WD, White RL: Angiogenic and immune parameters during recombinant interferon-a2b adjuvant treatment in patients with melanoma. ONCOL RES 12:241-251 (2000).

Dubois RW, Vetter SMS, Atkins M, McMasters K, Halbert R, Miller SJ, Shiell R, Kirkwood J: Developing indications for the use of sentinel lymph node biopsy and adjuvant high-dose interferon alfa-2b in melanoma. ARCH DERMATOL 137:1217-1224 (2001).

Dudley ME, Wunderlich J, Nishimura MI, Yu D, Yang JC, Topalian SL, Schwartzentruber DJ, Hwu P, Marincola FM, Sherry R, Leitman SF, Rosenberg SA: Adoptive transfer of cloned melanoma-reactive T lymphocytes for the treatment of patients with metastatic melanoma. J IMMUNOTHER 24:363-373 (2001).

Egger E, Schalenbourg A, Zografos L, Bercher L, Boehringer T, Chamot L, Goitein G: Maximizing local tumor control and survival after proton beam radiotherapy of uveal melanoma. INT J RADIAT ONCOL BIOL PHYS 51:138-147 (2001).

Eggermont AMM: Frontiers in adjuvant therapy in stage II-III melanoma. TUMORI 87:S60-S63 (2001).

Eggermont AMM: The role interferon-alpha in malignant melanoma remains to be defined. EUR J CANCER 37:2147-2153 (2001).

Ekmekcioglu S, Ellerhorst J, Mhashilkar AM, Sahin AA, Read CM, Prieto VG, Chada S, Grimm EA: Down-regulated melanoma differentiation associated gene (MDA-7) expression in human melanomas. INT J CANCER 94:54-59 (2001).

Ericsson C, Seregard S, Bartolazzi A, Levitskaya E, Ferrone S, Kiessling R, Larsson O: Association of HLA class I and class II antigen expression and mortality in uveal melanoma. INVEST OPHTHALMOL VISUAL SCI 42:2153-2156 (2001).

Finger PT: Plaque radiation therapy for malignant melanoma of the iris and ciliary body. AMER J OPHTHALMOL 132:328-335 (2001).

Fink D, Schlagbauer-Wadl H, Selzer E, Lucas T, Wolff K, Pehamberger H, Eichler HG, Jansen B: Elevated procaspase levels in human melanoma. MELANOMA RES 11:385-393 (2001).

Franco AV, Zhang XD, VanBerkel E, Sanders JE, Zhang XY, Thomas WD, Nguyen T, Hersey P: The role of NF-kappaB in TNF-related apoptosis-inducing ligand (TRAIL)-induced apoptosis of melanoma cells. J IMMUNOL 166:5337-5345 (2001).

Friebe M, Mahmood A, Bolzati C, Drews A, Johannsen B, Eisenhut M, Kraemer D, Davison A, Jones AG: [Tc-99m]oxotechnetium(V) complexes of amine-amide-dithiol chelates with dialkylaminoalkyl substituents as potential diagnostic probes for malignant melanoma. J MED CHEM 44 :3132-3140 (2001).

Fujita H, Okada F, Hamada J, Hosokawa M, Moriuchi T, Koya RC, Kuzumaki N: Gelsolin functions as a metasatsis suppressor in B16-BL6 mouse melanoma cells and requirement of the carboxyl-terminus for its effect. INT J CANCER 93:773-780 (2001).

Gallino G, Belli F, Bonfanti G, Ditto A, Andreola S, Tragni G, Massone PPB , Civelli E, Vitellaro M, Leo E, Cascinelli N: Surgical treatment of gastric metastases from cutaneous melanoma: Experience of the National Cancer Institute of Milan. TUMORI 87:229-231 (2001).

Garbe C, Blum A: Epidemiology of cutaneous melanoma in Germany and worldwide. SKIN PHARMACOL APPL SKIN PHYS 14:280-290 (2001).

Ghanem G, Loir B, Morandini R, Sales F, Lienard D, Eggermont A, Lejeune F: On the release and half-life of S100B protein in the peripheral blood of melanoma patients. INT J CANCER 94:586-590 (2001).

Gilhooly EM, Morse-Gaudio M, Bianchi L, Reinhart L, Rose DP, Connolly JM, Reed JA, Albino AP: Loss of expression of protein kinase C b is a common phenomenon in human malignant melanoma: a result of transformation or differentiation? MELANOMA RES 11:355-369 (2001).

Goidin D, Mamessier A, Staquet MJ, Schmitt D, Berthier-Vergnes O: Ribosomal 18S RNA prevails over glyceraldehyde-3-phosphate dehydrogenase and b-actin genes as internal standard for quantitative comparison of mRNA levels in invasive and noninvasive human melanoma cell subpopulations. ANAL BIOCHEM 295:17-21 (2001).

Goldstein AM, Liu L, Sherman MG, Hogg D, Tucker MA, Struewing JP: A common founder for the V126D CDKN2A mutation in seven North American melanoma-prone families. BRIT J CANCER 85:527-530 (2001).

Grammatico P, Binni F, Eibenschutz L, DeBernardo C, Grammatico B, Rinaldi R, Desimone P, Catricalà C: CDKN2A novel mutation in a patient from a melanoma-prone family. MELANOMA RES 11:447-449 (2001).

Güven K, Kittler H, Wolff K, Pehamberger H: Cisplatin and carboplatin combination as second-line chemotherapy in dacarbazine-resistant melanoma patients. MELANOMA RES 11:411-415 (2001).

Haigh PI, Lucci A, Turner RR, Bostick PJ, Krasne DL, Stern SL, Morton DL: Carbon dye histologically confirms the identity of sentinel lymph nodes in cutaneous melanoma. CANCER 92:535-541 (2001).

Harada M, Li YF, El Gamil M, Ohnmacht GA, Rosenberg SA, Robbins PF: Melanoma-reactive CD8(+) T cells recognize a novel tumor antigen expressed in a wide variety of tumor types. J IMMUNOTHER 24:323-333 (2001).

Hoeller C, Jansen B, Heere-Ress E, Pustelnik T, Mossbacher U, Schlagbauer-Wadl H, Wolff K, Pehamberger H: Perilesional injection cutaneous melanoma of r-GM-CSF in patients with metastases. J INVEST DERMATOL 117:371-374 (2001).

Hoon DSB, Kuo CT, Wascher RA, Fournier P, Wang HJ, O'Day SJ: Molecular detection of metastatic melanoma cells in cerebrospinal fluid in melanoma patients. J INVEST DERMATOL 117:375-378 (2001).

Iuliano L, Gurgo A, Pranteda G: Guess what! Malignant metastatic melanoma presenting with generalized melanosis and melanuria. EUROPEAN J DERMATOLOGY 11:477-478 (2001).

Joukhadar C, Klein N, Mader RM, Schrolnberger C, Rizovski B, Heere-Ress E, Pehamberger H, Strauchmann N, Jansen B, Müller M: Penetration of dacarbazine and its active metabolite 5-aminoimidazole-4-carboxamide into cutaneous metastases of human malignant melanoma. CANCER 92:2190-2196 (2001).

Kageshita T, Hamby CV, Ishihara T, Matsumoto K, Saida T, Ono T: Loss of b-catenin expression associated with disease progression in malignant melanoma. BRIT J DERMATOL 145:210-216 (2001).

Kashani-Sabet M, Sagebiel RW, Ferreira CMM, Nosrati M, Miller JR: Vascular involvement in the prognosis of primary cutaneous melanoma. ARCH DERMATOL 137:1169-1173 (2001).

Kikuchi A, Nieda M, Schmidt C, Koezuka Y, Ishihara S, Ishikawa Y, Tadokoro K, Durrant S, Boyd A, Juji T, Nicol A: In vitro anti-tumour activity of a-galactosylceramide-stimulated human invariant Va24+NKT cells against melanoma. BRIT J CANCER 85:741-746 (2001).

Kishida T, Asada H, Satoh E, Tanaka S, Shinya M, Hirai H, Iwai M, Tahara H, Imanishi J, Mazda O: In vivo electroporation-mediated transfer of interleukin-12 and interleukin-18 genes induces significant antitumor effects against melanoma in mice. GENE THERAPY 8:1234-1240 (2001).

Kittler H, Weitzdorfer R, Pehamberger H, Wolff K, Binder M: Compliance with follow-up and prognosis among patients with thin melanomas. EUR J CANCER 37:1504-1509 (2001).

Kivelä T, Eskelin S, Mäkitie T, Summanen P: Exudative retinal detachment from malignant uveal melanoma: Predictors and prognostic significance. INVEST OPHTHALMOL VISUAL SCI 42:2085-2093 (2001).

Kligman LH, Elenitsas R: Melanoma induction in a hairless mouse with short-term application of dimethylbenz[a]anthracene. MELANOMA RES 11:319-324 (2001).

Kobayashi H, Lu J, Celis E: Identification of helper T-cell epitopes that encompass or lie proximal to cytotoxic T-cell epitopes in the gp100 melanoma tumor antigen. CANCER RES 61:7577-7584 (2001).

Kociecki J, Biczysko W, Journée-DeKorver HG, Keunen JEE, Pecold K: Additional cell damage after transpupillary thermotherapy in choroidal malignant melanoma. MELANOMA RES 11:511-515 (2001).

Krimpenfort P, Quon KC, Mooi WJ, Loonstra A, Berns A: Loss of p16(Ink4a) confers susceptibility to metastatic melanoma in mice. NATURE 413:83-86 (2001).

Krohn J, Seland JH, Monge OR, Rekstad BL: Transillumination for accurate placement of radioactive plaques in brachytherapy of choroidal melanoma. AMER J OPHTHALMOL 132:418-419 (2001).

Kroiss MM, Vogt TMM, Schlegel J, Landthaler M, Stolz W: Microsatellite instability in malignant melanomas. ACTA DERMATO VENEREOL 81:242-245 (2001).

Krygier G, Lombardo K, Vargas C, Alvez I, Costa R, Ros M, Echenique M, Navarro V, Delgado L, Viola A, Muse I: Familial uveal melanoma: report on three sibling cases. BRIT J OPHTHALMOL 85:1007-1008 (2001).

Kudva GC, Collins BT, Dunphy FR: Thalidomide for malignant melanoma. N ENGL J MED 345:1214-1215 (2001).

Kumar R, Smeds J, Berggren P, Straume O, Rozell BL, Akslen LA, Hemminki K : A single nucleotide polymorphism in the 3'untranslated region of the CDKN2A gene is common in sporadic primary melanomas but mutations in the CDKN2B, CDKN2C, CDK4 and p53 genes are rare. INT J CANCER 95:388-393 (2001).

Kurnick JT, Ramirez-Montagut T, Boyle LA, Andrews DM, Pandolfi F, Durda PJ, Butera D, Dunn IS, Benson EM, Gobin SJP, VandenElsen PJ: A novel autocrine pathway of tumor escape from immune recognition: Melanoma cell lines produce a soluble protein that diminishes expression of the gene encoding the melanocyte lineage Melan-A/MART-1 antigen through down-modulation of its promoter. J IMMUNOL 167:1204-1211 (2001).

Kusumoto M, Umeda S, Ikubo A, Aoki Y, Tawfik O, Oben R, Williamson S, Jewell W, Suzuki T: Phase 1 clinical trial of irradiated autologous melanoma cells adenovirally transduced with human GM-CSF gene. CANCER IMMUNOL IMMUNOTHER 50:373-381 (2001).

Lam L, Krementz E, McGinness C, Godfrey R: Melanoma of the clavicular region - Multimodal treatment. ARCH SURG 136:1054-1058 (2001).

Lambert JD, Meyers RO, Timmermann BN, Dorr RT: tetra-O-Methylnordihydroguaiaretic acid inhibits melanoma in vivo. CANCER LETT 171:47-56 (2001).

Lana AMA, Wen DR, Cochran AJ: The morphology, immunophenotype and distribution of paracortical dendritic leucocytes in lymph nodes regional to cutaneous melanoma. MELANOMA RES 11 :401-410 (2001).

Landi MT, Baccarelli A, Calista D, Fears TR, Landi G: Glucocorticoid use and melanoma risk. INT J CANCER 94:302-303 (2001).

Lapointe R, Royal RE, Reeves ME, Altomare I, Robbins PF, Hwu P: Retrovirally transduced human dendritic cells can generate T cells recognizing multiple MHC class I and class II epitopes from the melanoma antigen glycoprotein 100. J IMMUNOL 167:4758-4764 (2001).

Lee J, Logani S, Lakosha H, Schroeder RP, Simpson R, Jampol LM: Preretinal neovascularisation associated with choroidal melanoma. BRIT J OPHTHALMOL 85:1309-1312 (2001).

Lee JAH: The systematic relationship between melanomas diagnosed in situ and when invasive. MELANOMA RES 11:523-529 (2001).

Lee P, Wang F, Kuniyoshi J, Rubio V, Stuges T, Groshen S, Gee C, Lau R, Jeffery G, Margolin K, Marty V, Weber J: Effects of interleukin-12 on the immune response to a multipeptide vaccine for resected metastatic melanoma. J CLIN ONCOL 19:3836-3847 (2001).

Lefort K, Rouault JP, Tondereau L, Magaud JP, Doré JF: The specific activation of gadd45 following UVB radiation requires the POU family gene product N-oct3 in human melanoma cells. ONCOGENE 20:7375-7385 (2001).

Lorentzen HF, Weismann K, Larsen FG: Structural asymmetry as a dermatoscopic indicator of malignant melanoma - a latent class analysis of sensitivity and classification errors. MELANOMA RES 11:495-501 (2001).

Lucas T, Pratscher B, Krishnan S, Fink D, Günsberg P, Wolschek M, Wacheck V, Muster T, Romirer I, Wolff K, Pehamberger H, Eichler HG, Rangnekar VM, Jansen B: Differential expression levels of Par-4 in melanoma. MELANOMA RES 11:379-383 (2001).

Lumbroso L, Desjardins L, Levy C, Plancher C, Frau E, D'Hermies F, Schlienger P, Mammar H, Delacroix S , Nauraye C, Ferrand R, Desblancs C, Mazal A, Asselain B: Intraocular inflammation after proton beam irradiation for uveal melanoma. BRIT J OPHTHALMOL 85:1305-1308 (2001).

Mazzocchi A, Melani C, Rivoltini L, Castelli C, DelVecchio M, Lombardo C, Colombo MP, Parmiani G: Simultaneous transduction of B7-1 and IL-2 genes into human melanoma cells to be used as vaccine: enhancement of stimulatory activity for autologous and allogeneic lymphocytes. CANCER IMMUNOL IMMUNOTHER 50:199-211 (2001).

Mäkitie T, Carpén O, Vaheri A, Kivelä T: Ezrin as a prognostic indicator and its relationship to tumor characteristics in uveal malignant melanoma. INVEST OPHTHALMOL VISUAL SCI 42:2442-2449 (2001).

Melia J, Moss S, Coleman D, Frost T, Graham-Brown R, Hunter JAA, Marsden RA, duVivier A, Warin AP, White J, Whitehead SM, Wroughton MA: The relation between mortality from malignant melanoma and early detection in the Cancer Research Campaign Mole Watcher Study. BRIT J CANCER 85:803-807 (2001).

Mendez R, Serrano A, Jäger E, Maleno I, Ruiz-Cabello F, Knuth A, Garrido E: Analysis of HLA class I expression in different metastases from two melanoma patients undergoing peptide immunotherapy. TISSUE ANTIGEN 57:508-519 (2001).

Moins N, Papon J, Seguin H, Gardette D, Moreau MF, Labarre P, Bayle M, Michelot J, Gramain JC, Madelmont JC, Veyre A: Synthesis, characterization and comparative biodistribution study of a new series of p-iodine-125 benzamides as potential melanoma imaging agents. NUCL MED BIOL 28:799-808 (2001).

Mooi WJ: Small cell melanoma. J CLIN PATHOL 54:655 (2001).

Moretti S, Chiarugi A, Semplici F, Salvi A, DeGiorgi V, Fabbri P, Mazzoli S: Serum imbalance of cytokines in melanoma patients . MELANOMA RES 11:395-399 (2001).

Morton DL: Cytoreductive surgery and adjuvant immunotherapy in the management of metastatic melanoma. TUMORI 87:S57-S59 (2001).

Murakami T, Toda S, Fujimoto M, Ohtsuki M, Byers HR, Etoh T, Nakagawa H: Constitutive activation of Wnt/b-catenin signaling pathway in migration-active melanoma cells: Role of LEF-1 in melanoma with increased metastatic potential. BIOCHEM BIOPHYS RES COMMUN 288:8-15 (2001).

Nahde T, Müller K, Fahr A, Müller R, Brüsselbach S: Combined transductional and transcriptional targeting of melanoma cells by artificial virus-like particles. J GENE MED 3:353-361 (2001).

Nakamoto K, Ito A, Watabe K, Koma Y, Asada H, Yoshikawa K, Shinomura Y, Matsuzawa Y, Nojima H, Kitamura Y: Increased expression of a nucleolar Nop5/Sik family member in metastatic melanoma cells - Evidence for its role in nucleolar sizing and function. AMER J PATHOL 159:1363-1374 (2001).

Nemeth MA, Hsu TC, Pathak S: Chromosome instability in the murine melanoma cell line K-1735 is due to drug-specific mechanisms. GENET MOL BIOL 23:763-769 (2000).

Nesbit M, Schaider H, Miller TH, Herlyn M: Low-level monocyte chemoattractant protein-1 stimulation of monocytes leads to tumor formation in nontumorigenic melanoma cells. J IMMUNOL 166:6483-6490 (2001).

Niethammer AG, Xiang R, Ruehlmann JM, Lode HN, Dolman CS, Gillies SD, Reisfeld RA: Targeted interleukin 2 therapy enhances protective immunity induced by an autologous oral DNA vaccine against murine melanoma. CANCER RES 61:6178-6184 (2001).

Noonan FP, Recio JA, Takayama H, Duray P, Anver MR, Rush WL, DeFabo EC, Merlino G: Neonatal sunburn and melanoma in mice - Severe sunburn in newborn, but not adult, mice is linked with melanoma in later life. NATURE 413:271-272 (2001).

Ntayi C, Lorimier S, Berthier-Vergnes O, Hornebeck W, Bernard P: Cumulative influence of matrix metalloproteinase-1 and -2 in the migration of melanoma cells within three-dimensional type I collagen lattices. EXP CELL RES 270:110-118 (2001).

O'Day SJ, Boasberg PD, Kristedja TS, Martin M, Wang HJ, Fournier P, Cabot M, DeGregorio MW, Gammon G: High-dose tamoxifen added to concurrent biochemotherapy with decrescendo interleukin-2 in patients with metastatic melanoma. CANCER 92:609-619 (2001).

Ocaña-Riola R, Martínez-García C, Serrano S, Buendía-Eisman A, Ruíz-Baena C, Canela-Soler J: Population-based study of cutaneous malignant melanoma in the Granada province (Spain), 1985-1992. EUR J EPIDEMIOL 17:169-174 (2001).

Ohnishi Y, Tajima S, Ishibashi A: Coordinate expression of membrane type-matrix metalloproteinases-2 and 3 (MT2-MMP and MT3-MMP) and matrix metalloproteinase-2 (MMP-2) in primary and metastatic melanoma cells. EUROPEAN J DERMATOLOGY 11:420-423 (2001).

Ojeifo JO, Lee HR, Rezza P, Su N, Zwiebel JA: Endothelial cell-based systemic gene therapy of metastatic melanoma. CANCER GENE THERAPY 8:636-648 (2001).

Oliveira NG, Castro M, Rodrigues AS, Gonçalves IC, Cassapo R, Fernandes AP, Chaveca T, Toscano-Rico JM, Rueff J: Evaluation of the genotoxic effects of the boron neutron capture reaction in human melanoma cells using the cytokinesis block micronucleus assay. MUTAGENESIS 16:369-375 (2001).

Ostmeier H, Fuchs B, Otto F, Mawick R, Lippold A, Krieg V, Suter L: Prognostic immunohistochemical markers of primary human melanomas. BRIT J DERMATOL 145:203-209 (2001).

Patterson-Kane JC, Sanchez LC, Uhl EW, Edens LM: Disseminated metastatic intramedullary melanoma in an aged grey horse. J COMP PATHOL 125:204-207 (2001).

Pe'er J, Stefani FH, Seregard S, Kivela T, Lommatzsch P, Prause JU, Sobottka B, Damato B, Chowers I: Cell proliferation activity in posterior uveal melanoma after Ru-106 brachytherapy: an EORTC ocular oncology group study. BRIT J OPHTHALMOL 85:1208-1212 (2001).

Piantelli M, Tatone D, Castrilli G, Savini F, Maggiano N, Larocca LM, Ranelletti FO, Natali PG: Quercetin and tamoxifen sensitize human melanoma cells to hyperthermia. MELANOMA RES 11:469-476 (2001).

Pollock PM, Stark MS, Palmer JM, Walters MK, Aitken JF, Martin NG, Hayward NK: Mutation analysis of the CDKN2A promoter in Australian melanoma families. GENE CHROMOSOME CANCER 32:89-94 (2001).

Polsky D, Bastian BC, Hazan C, Melzer K, Pack J, Houghton A, Busam K, Cordon-Cardo C, Osman I: HDM2 protein overexpression, but not gene amplification, is related to tumorigenesis of cutaneous melanoma. CANCER RES 61:7642-7646 (2001).

Polsky D, Young AZ, Busam KJ, Alani RM: The transcriptional repressor of p16/Ink4a, Id1, is up-regulated in early melanomas. CANCER RES 61:6008-6011 (2001).

Poma A, Cesare P, Marcozzi G, Spanò L: Nuclear damage induced by liposomes containing FITC-labelled saporin on human melanoma cells in vitro. J LIPOSOME RES 11:91-102 (2001).

Radmacher MD, Simon R, Desper R, Taetle R, Schäffer AA, Nelson MA: Graph models of oncogenesis with an application to melanoma. J THEOR BIOL 212:535-548 (2001).

Raisova M, Hossini AM, Eberle J, Riebeling C, Wieder T, Sturm I, Daniel PT, Orfanos CE, Geilen CC: The Bax/Bcl-2 ratio determines the susceptibility of human melanoma cells to CD95/Fas-mediated apoptosis. J INVEST DERMATOL 117:333-340 (2001).

Rem AI, Oosterhuis JA, Journée-deKorver JG, VandenBerg TJTP : Transscleral laser thermotherapy of hamster Greene melanoma: inducing tumour necrosis without scleral damage. MELANOMA RES 11:503-509 (2001).

Rizos H, Darmanian AP, Holland EA, Mann GJ, Kefford RF: Mutations in the INK4a/ARF melanoma susceptibility locus functionally impair p14(ARF). J BIOL CHEM 276:41424-41434 (2001).

Rizos H, Puig S, Badenas C, Malvehy J, Darmanian AP, Jiménez L, Milà M, Kefford RF: A melanoma-associated germline mutation in exon 1&BETA; inactivates p14ARF. ONCOGENE 20:5543-5547 (2001).

Romero JM, Finger PT, Rosen RB, Iezzi R: Three-dimensional ultrasound for the measurement of choroidal melanomas. ARCH OPHTHALMOL 119:1275-1282 (2001).

Russell-Jones R: The value of reverse transcription-polymerase chain reaction in malignant melanoma. BRIT J DERMATOL 145:193-194 (2001).

Saleh FH, Crotty KA, Hersey P, Menzies SW: Primary melanoma tumour regression associated with an immune response to the tumour-associated antigen Melan-A/MART-1. INT J CANCER 94:551-557 (2001).

Sandberg AA, Bridge JA: Updates on the cytogenetics and molecular genetics of bone and soft tissue tumors: clear cell sarcoma (malignant melanoma of soft parts). CANCER GENET CYTOGENET 130:1-7 (2001).

Sanz-Navares E, Fernandez N, Kazanietz MG, Rotenberg SA: Atypical protein kinase Czeta suppresses migration of mouse melanoma cells. CELL GROWTH DIFFER 12:517-524 (2001).

Sargent LM, Nelson MA, Lowry DT, Senft JR, Jefferson AM, Ariza ME, Reynolds SH: Detection of three novel translocations and specific common chromosomal break sites in malignant melanoma by spectral karyotyping. GENE CHROMOSOME CANCER 32 :18-25 (2001).

Scevola S, Gault DT: Black nodes: No melanoma. PLAST RECONSTR SURG 108:1458-1459 (2001).

Scholes AGM, Liloglou T, Maloney P, Hagan S, Nunn J, Hiscott P, Damato BE, Grierson I, Field JK: Loss of heterozygosity on chromosomes 3, 9, 13 and 17, including the retinoblastoma locus, in uveal melanoma. INVEST OPHTHALMOL VISUAL SCI 42:2472-2477 (2001).

Scott AM, Lee FT, Hopkins W, Cebon JS, Wheatley JM, Liu ZQ, Smyth FE, Murone C, Sturrock S, MacGregor D, Hanai N, Inoue K, Yamasaki M, Brechbiel MW, Davis ID, Murphy R, Hannah A, Lim-Joon M, Chan T, Chong G, Ritter G, Hoffman EW, Burgess AW, Old LJ: Specific targeting, biodistribution, and lack of immunogenicity of chimeric anti-GD3 monoclonal antibody KM871 in patients with metastatic melanoma: Results of a phase I trial. J CLIN ONCOL 19:3976-3987 (2001).

Seftor REB, Seftor EA, Koshikawa N, Meltzer PS, Gardner LMG, Bilban M, Stetler-Stevenson WG, Quaranta V, Hendrix MJC: Cooperative interactions of laminin 5 gamma2 chain, matrix metalloproteinase-2, and membrane type-1-matrix/metalloproteinase are required for mimicry of embryonic vasculogenesis by aggressive melanoma . CANCER RES 61:6322-6327 (2001).

Serrano A, Tanzarella S, Lionello I, Mendez R, Traversari C, Ruiz-Cabello F, Garrido F: Expression of HLA class I antigens and restoration of antigen-specific ctl response in melanoma cells following 5-aza-2'-deoxycytidine treatment. INT J CANCER 94:243-251 (2001).

Shields CL, Shields JA, Armstrong T: Management of conjunctival and corneal melanoma with surgical excision, amniotic membrane allograft, and topical chemotherapy. AMER J OPHTHALMOL 132:576-578 (2001).

Shirasaki F, Takata M, Hatta N, Takehara K: Loss of expression of the metastasis suppressor gene KiSS1 during melanoma progression and its association with LOH of chromosome 6q16.3-q23. CANCER RES 61:7422-7425 (2001).

Slominski A, Wortsman J, Carlson AJ, Matsuoka LY, Balch CM, Mihm MC: Malignant melanoma - An update. ARCH PATHOL LAB MED 125:1295-1306 (2001).

Smith C, Cerundolo V: Immunotherapy of melanoma. IMMUNOLOGY 104:1-7 (2001).

Sober AJ, Chuang TY, Duvic M, Farmer ER, Grichnik JM, Halpern AC, Ho V, Holloway V, Hood AF, Johnson TM, Lowery BJ: Guidelines of care for primary cutaneous melanoma. J AMER ACAD DERMATOL 45:579-586 (2001).

Southwick A, Rigby O, Daily M, Noyes RD: Malignant melanoma of the penis and sentinel lymph node biopsy. J UROL 166:1833 (2001).

Soyer HP, Argenziano G, Talamini R, Chimenti S: Is dermoscopy useful for the diagnosis of melanoma? ARCH DERMATOL 137:1361-1363 (2001).

Staib L, Harel W, Mitchell MS: Optimization of intracerebral tumour protection by active-specific immunization against murine melanoma B16/G3.12. MELANOMA RES 11:325-335 (2001).

Staibano S, LoMuzio L, Pannone G, Somma P, Farronato G, Franco R, Bambini F, Serpico R, DeRosa G: P53 and hMSH2 expression in basal cell carcinomas and malignant melanomas from photoexposed areas of head and neck region. INT J ONCOL 19:551-559 (2001).

Steitz J, Brück J, Knop J, Tüting T: Adenovirus-transduced dendritic cells stimulate cellular immunity to melanoma via a CD4(+) T cell-dependent mechanism. GENE THERAPY 8:1255-1263 (2001).

Suzuki Y, Isemura M: Inhibitory effect of epigallocatechin gallate on adhesion of murine melanoma cells to laminin. CANCER LETT 173:15-20 (2001).

Theodorescu D, Older RA, Sorenson EJ: Metastatic melanoma presenting as an ileal conduit filling defect. J UROL 166:1393-1394 (2001).

Thomas C, Fertil B: Sensitivity of human melanoma cells to adherent leukocytes depends on the ratio between them, the activation status of adherent leukocytes and the metastatic potential of tumor cells. CANCER IMMUNOL IMMUNOTHER 50:181-190 (2001).

Toivonen P, Kivelä T: Unusual tumors involving the head and neck region - Case 2. Malignant uveal melanoma in ocular melanocytosis. J CLIN ONCOL 19:4174-4177 (2001).

Tsoncheva VL, Kirov KS, Valkova CA, Milchev GI: Evaluation of delayed apoptotic response in lethally irradiated human melanoma cell lines. Z NATURFORSCH C 56:660-665 (2001).

Uchida M, Matsunami T: Malignant amelanotic melanoma of the middle ear. ARCH OTOLAR HEAD NECK SURGERY 127:1126-1128 (2001).

vanElsas A, Sutmuller RPM, Hurwitz AA, Ziskin J, Villasenor J, Medema JP, Overwijk W, Restifo NP, Melief CJM, Offringa R, Allison JP: Elucidating the autoimmune and antitumor effector mechanisms of a treatment based on cytotoxic T lymphocyte antigen-4 blockade in combination with a B16 melanoma vaccine: Comparison of prophylaxis and therapy. J EXP MED 194:481-489 (2001).

Voura EB, Ramjeesingh RA, Montgomery AMP, Siu CH: Involvement of integrin a(v)b(3) and cell adhesion molecule L1 in transendothelial migration of melanoma cells. MOL BIOL CELL 12:2699-2710 (2001).

Voura EB, Chen N, Siu CH: Platelet-endothelial cell adhesion molecule-1 (CD31) redistributes from the endothelial junction and is not required for the transendothelial migration of melanoma cells. CLIN EXP METASTAS 18:527-532 (2001).

Wakasugi S, Kageshita T, Ono T: Metastatic melanoma to the palatine tonsil with a favourable prognosis. BRIT J DERMATOL 145:327-329 (2001).

Wald M, Olejár T, Sebková V, Zadinová M, Boubelík M, Poucková P: Mixture of trypsin, chymotrypsin and papain reduces formation of metastases and extends survival time of C(57)Bl(6) mice with syngeneic melanoma B16. CANCER CHEMOTHER PHARMACOL 47:S16-S22 (2001).

Waldmann V, Wacker J, Deichmann M: Mutations of the activation-associated phosphorylation sites at codons 308 and 473 of protein kinase B are absent in human melanoma. ARCH DERMATOL RES 293:368-372 (2001).

Walker G, Hayward N: No evidence of a role for activating CDK2 mutations in melanoma. MELANOMA RES 11:343-348 (2001).

Wang J, Murakami T, Hakamata Y, Ajiki T, Jinbu Y, Akasaka Y, Ohtsuki M, Nakagawa H, Kobayashi E: Gene gun-mediated oral mucosal transfer of interleukin 12 cDNA coupled with an irradiated melanoma vaccine in a hamster model: Successful treatment of oral melanoma and distant skin lesion. CANCER GENE THERAPY 8:705-712 (2001).

Watanabe Y, Ueda H, Nakajima H, Minoura R, Hoshiai H, Noda K: Amelanotic malignant melanoma arising in an ovarian cystic teratoma - A case report. ACTA CYTOL 45:756-760 (2001).

Wilson MW, Schelonka LP, Siegel D, Meininger A, Ross D: Immunohistochemical localization of NAD(P)H:quinone oxidoreductase in conjunctival melanomas and primary acquired melanosis. CURR EYE RES 22:348-352 (2001).

Winter H, Hu HM, McClain K, Urba WJ, Fox BA: Immunotherapy of melanoma: A dichotomy in the requirement for IFN-gamma in vaccine-induced antitumor immunity versus adoptive immunotherapy. J IMMUNOL 166:7370-7380 (2001).

Wollina U, Hipler UC, Knöll B, Graefe T, Kaatz M, Kirsch K: Serum matrix metalloproteinase-2 in patients with malignant melanoma. J CANCER RES CLIN ONCOL 127:631-635 (2001).

Young P, Purdie D, Jackman L, Molloy D, Green A: A study of infertility treatment and melanoma. MELANOMA RES 11:535-541 (2001).

Zacks DN, Pinnolis MK, Berson EL, Gragoudas ES: Melanoma-associated retinopathy and recurrent exudative retinal detachments in a patient with choroidal melanoma. AMER J OPHTHALMOL 132:578-581 (2001).

Zamolo G, Gruber F, Cabrijan L, Micovic V, Iternicka Z, Jonic N: Influence of tumor thickness and vascularity on survival in cutaneous melanoma. ACTA MED OKAYAMA 55:289-293 (2001).

Zamze S, Wing DR, Wormald MR, Hunter AP, Dwek RA, Harvey DJ: A family of novel, acidic N-glycans in Bowes melanoma tissue plasminogen activator have L2/HNK-1-bearing antennae, many with sulfation of the fucosylated chitobiose core. EUR J BIOCHEM 268:4063-4078 (2001).

Zendman AJW, deWit NJW, vanKraats AA, Weidle UH, Ruiter DJ, vanMuijen GNP: Expression profile of genes coding for melanoma differentiation antigens and cancer/testis antigens in metastatic lesions of human cutaneous melanoma. MELANOMA RES 11:451-459 (2001).

Zennadi R, Abdel-Wahab Z, Seigler HF, Darrow TL: Generation of melanoma-specific, cytotoxic CD4(+) T helper 2 cells: Requirement of both HLA-DR15 and Fas antigens on melanomas for their lysis by th2 cells. CELL IMMUNOL 210:96-105 (2001).

Zhang XD, Zhang XY, Gray CP, Nguyen T, Hersey P: Tumor necrosis factor-related apoptosis-inducing ligand-induced apoptosis of human melanoma is regulated by Smac/DIABLO release from mitochondria. CANCER RES 61:7339-7348 (2001).

Zhao X, Demary K, Wong L, Vaziri C, McKenzie AB, Eberlein TJ, Spanjaard RA : Retinoic acid receptor-independent mechanism of apoptosis of melanoma cells by the retinoid CD437 (AHPN). CELL DEATH DIFFERENTIATION 8:878-886 (2001).

Zhao XX, Murata T, Ohno S, Day N, Song J, Nomura N, Nakahara T, Yokoyama KK: Protein kinase Ca plays a critical role in mannosylerythritol lipid-induced differentiation of melanoma B16 cells. J BIOL CHEM 276:39903-39910 (2001).

MSH, POMC, GROWTH FACTORS & RECEPTORS

Andersson PM, Boman A, Seifert E, Skottner A, Lundstedt T: Ligands to the melanocortin receptors. EXPERT OPIN THER PATENTS 11:1583-1592 (2001).

Bastiaens M, terHuurne J, Gruis N, Bergman W, Westendorp R, Vermeer BJ, Bavinck JNB: The melanocortin-1-receptor gene is the major freckle gene. HUM MOL GENET 10 :1701-1708 (2001).

Bednarek MA, Feighner SD, Hreniuk DL, Palyha OC, Morin NR, Sadowski SJ, MacNeil DJ, Howard AD, VanderPloeg LHY: Short segment of human melanin-concentrating hormone that is sufficient for full activation of human melanin-concentrating hormone receptors 1 and 2. BIOCHEMISTRY USA 40:9379-9386 (2001).

Böhm M, Luger TA: The role of melanocortins in skin homeostasis. HORMONE RES 54:287-293 (2000).

Broudy VC, Lin NL, Sabath DF: The fifth immunoglobulin-like domain of the Kit receptor is required for proteolytic cleavage from the cell surface. CYTOKINE 15:188-195 (2001).

Castel H, Vaudry H: Nitric oxide directly activates GABA(A) receptor function through a cGMP/protein kinase-independent pathway in frog pituitary melanotrophs. J NEUROENDOCRINOL 13:695-705 (2001).

Dubern B, Clément K, Pelloux V, Froguel P, Girardet JP, Guy-Grand B, Tounian P: Mutational analysis of melanocortin-4 receptor, agouti-related protein, and a-melanocyte-stimulating hormone genes in severely obese children. J PEDIAT 139:204-209 (2001).

Graham KS, Leibel RL: Yellow mice, red hair, and childhood obesity: The melanocortinergic pathway in energy homeostasis. J PEDIAT 139:177-181 (2001).

Gunn TM, Inui T, Kitada K, Ito S, Wakamatsu K, He L, Bouley DM, Serikawa T, Barsh GS: Molecular and phenotypic analysis of Attractin mutant mice. GENETICS 158:1683-1695 (2001).

Healy E, Jordan SA, Budd PS, Suffolk R, Rees JL, Jackson IJ: Functional variation of MC1R alleles from red-haired individuals. HUM MOL GENET 10:2397-2402 (2001).

Hintermann E, Tanner H, Talke-Messerer C, Schlumberger S, Zumsteg U, Eberle AN: Interaction of melanin-concentrating hormone (MCH), neuropeptide E-I (NEI) 9 neuropeptide G-E (NGE), and a-msh with melanocortin and MCH receptors on mouse B16 melanoma cells. J RECEPT SIGNAL TRANSDUCT RES 21:93-116 (2001).

Hruby VJ, Agnes RS, Cai CZ: Design of peptide agonists. G PROTEIN PATHWAYS, PT A, RECEPTORS. 73-91 (2002).

Huang EY, Madireddi MT, Gopalkrishnan RV, Leszczyniecka M, Su ZZ, Lebedeva IV, Kang DC, Jiang HP, Lin JJ, Alexandre D, Chen YM, Vozhilla N, Mei MX, Christiansen KA, Sivo F, Goldstein NI, Mhashilkar AB, Chada S, Huberman E, Pestka S, Fisher PB: Genomic structure, chromosomal localization and expression profile of a novel melanoma differentiation associated (mda-7) gene with cancer specific growth suppressing and apoptosis inducing properties. ONCOGENE 20:7051-7063 (2001).

Jean D, Bar-Eli M: Targeting the ATF-1/CREB transcription factors by single chain Fv fragment in human melanoma: Potential modality for cancer therapy. CRIT REV IMMUN 21:275-286 (2001).

Kageshita T, Mizuno M, Ono T, Matsumoto K, Saida T, Yoshida J: Growth inhibition of human malignant melanoma transfected with the human interferon-b gene by means of cationic liposomes. MELANOMA RES 11:337-342 (2001).

Kanda N, Watanabe S: 17b-estradiol, progesterone, and dihydrotestosterone suppress the growth of human melanoma by inhibiting interleukin-8 production. J INVEST DERMATOL 117:274-283 (2001).

Kanda N, Nakai K, Watanabe S: Gangliosides GD1b, GT1b, and GQ1b suppress the growth of human melanoma by inhibiting interleukin-8 production: The inhibition of adenylate cyclase. J INVEST DERMATOL 117:284-293 (2001).

Kaskel P, Sander S, Kron M, Kind P, Peter RU, Krähn G: Outdoor activities in childhood: a protective factor for cutaneous melanoma? Results of a case-control study in 271 matched pairs. BRIT J DERMATOL 145:602-609 (2001).

Kennedy C, terHuurne J, Berkhout M, Gruis N, Bastiaens M, Bergman W, Willemze R, Bavinck JNB: Melanocortin 1 receptor (MC1R) gene variants are associated with an increased risk for cutaneous melanoma which is largely independent of skin type and hair color. J INVEST DERMATOL 117:294-300 (2001).

Kono M, Nagata H, Umemura S, Kawana S, Osamura RY: In situ expression of corticotropin-releasing hormone (CRH) and proopiomelanocortin (POMC) genes in human skin. FASEB J 15:NIL (2001).

Liu JD, Chen SH, Lin CL, Tsai SH, Liang YC : Inhibition of melanoma growth and metastasis by combination with (-)-epigallocatechin-3-gallate and dacarbazine in mice. J CELL BIOCHEM 83:631-642 (2001).

Metzelaar-Blok JAW, terHuurne JAC, Hurks HMH, Keunen JEE, Jager MJ, Gruis NA: Characterization of melanocortin-1 receptor gene variants in uveal melanoma patients. INVEST OPHTHALMOL VISUAL SCI 42:1951-1954 (2001).

Palumbo A, Napolitano A, Carraturo A, Russo GL, d'Ischia M: Oxidative conversion of 6-nitrocatecholamines to nitrosating products: A possible contributory factor in nitric oxide and catecholamine neurotoxicity associated with oxidative stress and acidosis. CHEM RES TOXICOL 14:1296-1305 (2001).

Pisarchik A, Slominski AT: Alternative splicing of CRH-R1 receptors in human and mouse skin: identification of new variants and their differential expression. FASEB J 15:NIL (2001).

Rodolfo M, Catò EM, Soldati S, Ceruti R, Asioli M, Scanziani E, Vezzoni P, Parmiani G, Sacco MG: Growth of human melanoma xenografts is suppressed by systemic angiostatin gene therapy. CANCER GENE THERAPY 8:491-496 (2001).

Rodriguez M, Beauverger P, Naime I, Rique H, Ouvry C, Souchaud S, Dromaint S, Nagel N, Suply T, Audinot V, Boutin JA, Galizzi JP: Cloning and molecular characterization of the novel human melanin-concentrating hormone receptor MCH2. MOL PHARMACOL 60:632-639 (2001).

Satyamoorthy K, Li G, Vaidya B, Patel D, Herlyn M: Insulin-like growth factor-1 induces survival and growth of biologically early melanoma cells through both the mitogen-activated protein kinase and b-catenin pathways. CANCER RES 61:7318-7324 (2001).

Shishido E, Kadono S, Manaka I, Kawashima M, Imokawa G: The mechanism of epidermal dermatofibroma is associated hyperpigmentation in with stem cell factor and hepatocyte growth factor expression. J INVEST DERMATOL 117:627-633 (2001).

Slominski A, Wortsman J, Pisarchik A, Zbytek B, Linton EA, Mazurkiewicz JE, Wei ET: Cutaneous expression of corticotropin-releasing hormone (CRH), urocortin, and CRH receptors. FASEB J 15:1678-1693 (2001).

vanderVelden PA, Sandkuijl LA, Bergman W, Pavel S, vanMourik L, Frants RR, Gruis NA: Melanocortin-1 receptor variant R151C modifies melanoma risk in Dutch families with melanoma. AMER J HUM GENET 69:774-779 (2001).

Yu DN, Thomas-Tikhonenko A: Intratumoral delivery of an interferon gamma retrovirus-producing cells inhibits growth of a murine melanoma by a non-immune mechanism. CANCER LETT 173:145-154 (2001).

DEVELOPMENTAL BIOLOGY

Alizadeh AA, Ross DT, Perou CM, vandeRijn M: Towards a novel classification of human malignancies based on gene expression patterns. J PATHOL 195:41-52 (2001).

Brunetti CR, Selegue JE, Monteiro A, French V, Brakefield PM, Carroll SB: The generation and diversification of butterfly eyespot color patterns. CURR BIOL 11:1578-1585 (2001).

Langley RR, Carlisle R, Ma L, Specian RD, Gerritsen ME, Granger DN: Endothelial expression of vascular cell adhesion molecule-1 correlates with metastatic pattern in spontaneous melanoma. MICROCIRCULATION 8:335-345 (2001).

Paratore C, Goerich DE, Suter U, Wegner M, Sommer L: Survival and glial fate acquisition of neural crest cells are regulated by an interplay between the transcription factor Sox10 and extrinsic combinatorial signaling. DEVELOPMENT 128:3949-3961 (2001).

Shanske A, Ferreira JC, Leonard JC, Fuller P, Marion RW: Hirschsprung disease in an infant with a contiguous gene syndrome of chromosome 13. AMER J MED GENET 102:231-236 (2001).

DIFFERENTIATION

Akey JM, Wang H, Xiong M, Wu H, Liu W, Shriver MD, Jin L: Interaction between the melanocortin-1 receptor and P genes contributes to inter-individual variation in skin pigmentation phenotypes in a Tibetan population. HUM GENET 108:516-520 (2001).

Bilodeau ML, Greulich JD, Hullinger RL, Bertolotto C, Ballotti R, Andrisani OM: BMP-2 stimulates tyrosinase gene expression and melanogenesis in differentiated melanocytes. PIGM CELL RES 14:328-336 (2001).

Brilliant M, Gardner J: Melanosomal pH, pink locus protein and their roles in melanogenesis. J INVEST DERMATOL 117:386-387 (2001).

Caceres-Cortes JR, Alvarado-Moreno JA, Waga K, Rangel-Corona R, Monroy-Garcia A, Rocha-Zavaleta L, Urdiales-Ramos J, Weiss-Steider B, Haman A, Hugo P, Brousseau R, Hoang T: Implication of tyrosine kinase receptor and steel factor in cell density-dependent growth in cervical cancers and leukemias. CANCER RES 61:6281-6289 (2001).

Chen X, Cheng GJ, Dong SJ: Amperometric tyrosinase biosensor based on a sol-gel-derived titanium oxide-copolymer composite matrix for detection of phenolic compounds. ANALYST 126 :1728-1732 (2001).

Dorvault CC, Weilbaecher KN, Yee H, Fisher DE, Chiriboga LA, Xu Y, Chhieng DC: Microphthalmia transcription factor - A sensitive and specific marker for malignant melanoma in cytologic specimens. CANCER CYTOPATHOL 93:337-343 (2001).

Eberle AN, Bódi J, Orosz G, Süli-Vargha H, Jäggin V, Zumsteg U: Antagonist and agonist activities of the mouse Agouti protein fragment (91-131) at the melanocortin-1 receptor. J RECEPT SIGNAL TRANSDUCT RES 21:25-45 (2001).

Galibert MD, Carreira S, Goding CR: The Usf-1 transcription factor is a novel target for the stress-responsive p38 kinase and mediates UV-induced Tyrosinase expression. EMBO J 20:5022-5031 (2001).

García-Rivera J, Casadevall A: Melanization of Cryptococcus neoformans reduces its susceptibility to the antimicrobial effects of silver nitrate. MED MYCOL 39:353-357 (2001).

Housseau F, Moorthy A, Langer DA, Robbins PF, Gonzales MI, Topalian SL: N-linked carbohydrates in tyrosinase are required for its recognition by human MHC class II-restricted CD4(+) T cells. EUR J IMMUNOL 31:2690-2701 (2001).

Huizing M, Anikster Y, Fitzpatrick DL, Jeong AB, D'Souza M, Rausche M, Toro JR, Kaiser-Kupfer MI, White JG, Gahl WA: Hermansky-Pudlak syndrome type 3 in Ashkenazi Jews and other non-Puerto Rican patients with hypopigmentation and platelet storage-pool deficiency. AMER J HUM GENET 69:1022-1032 (2001).

Huizing M, Anikster Y, White JG, Gahl WA: Characterization of the murine gene corresponding to human Hermansky-Pudlak syndrome type 3: Exclusion of the subtle gray (sut) locus. MOL GENET METAB 74:217-225 (2001).

Huizing M, Sarangarajan R, Strovel E, Zhao Y, Gahl WA, Boissy RE: AP-3 mediates tyrosinase but not TRP-1 trafficking in human melanocytes. MOL BIOL CELL 12:2075-2085 (2001).

Ishida H, Matsumura K, Hata Y, Kawato A, Suginami K, Abe Y, Imayasu S, Ishishima E: Establishment of a hyper-protein production system in submerged Aspergillus oryzae culture under tyrosinase-encoding gene (mel0) promoter control. APPL MICROBIOL BIOTECHNOL 57:131-137 (2001).

Jacquemin P, Lannoy VJ, O'Sullivan J, Read A, Lemaigre FP, Rousseau GG: The transcription factor onecut-2 controls the Microphthalmia-associated transcription factor gene. BIOCHEM BIOPHYS RES COMMUN 285:1200-1205 (2001).

Jiménez M, Chazarra S, Escribano J, Cabanes J, García-Carmona F: Competitive inhibition of mushroom tyrosinase by 4-substituted benzaldehydes. J AGR FOOD CHEM 49:4060-4063 (2001).

Kushimoto T, Basrur V, Valencia J, Matsunaga J, Vieira WD, Ferrans VJ, Muller J, Appella E, Hearing VJ : A model for melanosome biogenesis based on the purification and analysis of early melanosomes. PROC NAT ACAD SCI USA 98:10698-10703 (2001).

LeBorgne R, Planque N, Martin P, Dewitte F, Saule S, Hoflack B: The AP-3-dependent targeting of the melanosomal glycoprotein QNR-71 requires a di-leucine-based sorting signal. J CELL SCI 114:2831-2841 (2001).

Lister JA, Close J, Raible DW: Duplicate mitf genes in zebrafish: Complementary expression and conservation of melanogenic potential. DEVELOP BIOL 237:333-344 (2001).

Liu TF, Kandala G, Setaluri V: PDZ domain protein GIPC interacts with the cytoplasmic tail of melanosomal membrane protein gp75 (tyrosinase-related protein-1). J BIOL CHEM 276:35768-35777 (2001).

Manga P, Orlow SJ: Inverse correlation between pink-eyed dilution protein expression and induction of melanogenesis by bafilomycin A1. PIGM CELL RES 14:362-367 (2001).

Marks MS, Seabra MC: The melanosome: Membrane dynamics in black and white. NAT REV MOL CELL BIOL 2:738-748 (2001).

Martínez-Esparza M, Ferrer C, Castells MT, García-Borrón JC, Zuasti A: Transforming growth factor b1 mediates hypopigmentation of B16 mouse melanoma cells by inhibition of melanin formation and melanosome maturation. INT J BIOCHEM CELL BIOL 33:971-983 (2001).

Matesic LE, Yip R, Reuss AE, Swing DA, O'Sullivan TN, Fletcher CF, Copeland NG, Jenkins NA: Mutations in Mlph, encoding a member of the Rab effector family, cause the melanosome transport defects observed in leaden mice. PROC NAT ACAD SCI USA 98:10238-10243 (2001).

Mullins DW, Bullock TNJ, Colella TA, Robila VV, Engelhard VH: Immune responses to the HLA-A*0201-restricted epitopes of tyrosinase and glycoprotein 100 enable control of melanoma outgrowth in HLA-A*0201-transgenic mice. J IMMUNOL 167:4853-4860 (2001).

Newton JM, Cohen-Barak O, Hagiwara N, Gardner JM, Davisson MT, King RA, Brilliant MH: Mutations in the human orthologue of the mouse underwhite gene (uw) underlie a new form of oculocutaneous albinism, OCA4. AMER J HUM GENET 69:981-988 (2001).

Pérez-Gilabert M, Morte A, Honrubia M, García-Carmona F: Monophenolase activity of latent Terfezia claveryi tyrosinase: Characterization and histochemical localization. PHYSIOL PLANT 113:203-209 (2001).

Planque N, Leconte L, Coquelle FM, Martin P, Saule S: Specific Pax-6/microphthalmia transcription factor interactions involve their DNA-binding domains and inhibit transcriptional properties of both proteins. J BIOL CHEM 276:29330-29337 (2001).

Potterf SB, Mollaaghababa R, Hou L, Southard-Smith EM, Hornyak TJ, Arnheiter H, Pavan WJ: Analysis of SOX10 function in neural crest-derived melanocyte development: SOX10-dependent transcriptional control of dopachrome tautomerase. DEVELOP BIOL 237:245-257 (2001).

Rodríguez-López JN, Fenoll LG, Peñalver MJ, García-Ruiz PA, Varón R, Martínez-Ortíz F, García-Cánovas F, Tudela J: Tyrosinase action on monophenols: evidence for direct enzymatic release of o-diphenol. BBA PROTEIN STRUCT MOL ENZYM 1548:238-256 (2001).

Sarangarajan R, Budev A, Zhao Y, Gahl WA, Boissy RE: Abnormal translocation of tyrosinase and tyrosinase-related protein 1 in cutaneous melanocytes of Hermansky-Pudlak syndrome and in melanoma cells transfected with anti-sense HPS1 cDNA. J INVEST DERMATOL 117:641-646 (2001).

Shen B, Rosenberg B, Orlow SJ: Intracellular distribution and late endosomal effects of the ocular albinism type 1 gene product: Consequences of disease-causing mutations and implications for melanosome biogenesis. TRAFFIC 2:202-211 (2001).

Shen B, Samaraweera P, Rosenberg B, Orlow SJ: Ocular albinism type 1: More than meets the eye. PIGM CELL RES 14:243-248 (2001).

Shiao SH, Higgs S, Adelman Z, Christensen BM, Liu SH, Chen CC: Effect of prophenoloxidase expression knockout on the melanization of microfilariae in the mosquito Armigeres subalbatus. INSECT MOL BIOL 10:315-321 (2001).

Sprong H, Degroote S, Claessens T, vanDrunen J, Oorschot V, Westerink BHC, Hirabayashi Y, Klumperman J, vanderSluijs P, vanMeer G: Glycosphingolipids are required for sorting melanosomal proteins in the Golgi complex. J CELL BIOL 155:369-379 (2001).

Strohal R, Mosser R, Kittler H, Wolff K, Jansen B, Brna C, Stingl G, Pehamberger H: MART-1/Melan-A and tyrosinase transcripts in peripheral blood of melanoma patients: PCR analyses and follow-up testing in relation to clinical stage and disease progression. MELANOMA RES 11:543-548 (2001).

Tauhata SBF, dosSantos DV, Taylor EW, Mooseker MS, Larson RE: High affinity binding of brain myosin-Va to F-actin induced by calcium in the presence of ATP. J BIOL CHEM 276:39812-39818 (2001).

Toyofuku K, Wada I, Valencia JC, Kushimoto T, Ferrans VJ, Hearing VJ: Oculocutaneous albinism types 1 and 3 are ER retention diseases: mutation of tyrosinase or Tyrp1 can affect the processing of both mutant and wild-type proteins. FASEB J 15:2149-2161 (2001).

Voisey J, Box NF, vanDaal A: A polymorphism study of the human Agouti gene and its association with MC1R. PIGM CELL RES 14:264-267 (2001).

Wang Y, Jiang HB, Kanost MR: Expression and purification of Manduca sexta prophenoloxidase-activating proteinase precursor (proPAP) from baculovirus-infected insect cells. PROTEIN EXPRESS PURIF 23:328-337 (2001).

Weilbaecher KN, Motyckova G, Huber WE, Takemoto CM, Hemesath TJ, Xu Y, Hershey CL, Dowland NR, Wells AG, Fisher DE: Linkage of M-CSF signaling to Mitf, TFE3, and the osteoclast defect in Mitf(mi/mi) mice. MOL CELL 8:749-758 (2001).

Westbroek W, Lambert J, Naeyaert JM: The dilute locus and Griscelli syndrome: Gateways towards a better understanding of melanosome transport. PIGM CELL RES 14:320-327 (2001).

MISCELLANEOUS

Jang HS, Cha JH, Oh CK, Kwon KS: Spitz naevus showing clinical features of both granuloma pyogenicum and pigmented naevus. BRIT J DERMATOL 145:349-350 (2001).

Luscombe CJ, French ME, Liu S, Saxby MF, Jones PW, Fryer AA, Strange RC : Outcome in prostate cancer: associations with skin type and polymorphism in pigmentation-related genes. CARCINOGENESIS 22:1343-1347 (2001).

Soyer HP, Argenziano G, Ruocco V, Chimenti S: Dermoscopy of pigmented skin lesions (Part II). EUROPEAN J DERMATOLOGY 11:483-498 (2001).

Stewart DA, Thomas SD, Mayfield CA, Miller DM: Psoralen-modified clamp-forming antisense oligonucleotides reduce cellular c-Myc protein expression and B16-F0 proliferation. NUCL ACID RES 29:4052-4061 (2001)