N° 44 - December 2002

ESPCR BULLETIN

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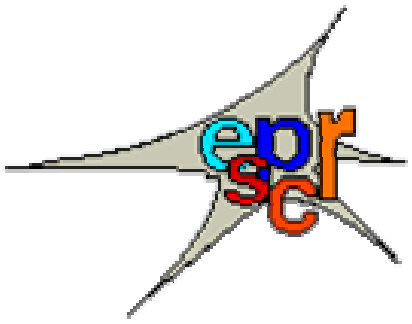

EUROPEAN SOCIETY FOR PIGMENT CELL RESEARCH *BULLETIN*

N° 44 - Dec 2002

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*** HAPPY NEW YEAR 2003 ***

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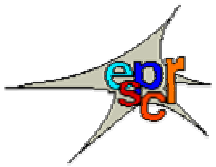

LETTER TO THE EDITOR
DISCUSSION, REVIEW,
SHORT COMMUNICATION, ...

A message from the President of the International Federation of Pigment Cell Societies, to members of the ESPCR, JSPCR and PASPCR

<www.ifpcs.org>

Dear Friends and Colleagues,

Seasonal Greetings, in a year when world events -although still regrettably far from universal peace - have at least seemed less terrible than in 2001. It is with great pleasure that I start to write the IFPCS President's message for the first time, although with a sense of disbelief. (Surely there must be some mistake? Could the real President please step forward?) More seriously, I will begin by expressing profound thanks to the outgoing Officers of the IFPCS: Shosuke Ito (President), Stan Pavel (Vice President) and Dick King (Secretary-Treasurer), with every appreciation of all their hard work for the Federation over the past three years. All members will surely join me in those thanks, and also in welcoming our other new IFPCS officers, Zalfa Abdel-Malek (Vice-President) and Yasushi Tomita (Secretary-Treasurer), and new IFPCS Council members Lionel Larue and Ray Boissy.

It is genuinely a pleasure to have the chance to contribute to the running of the IFPCS. Our Federation of three Societies is relatively young, having been created in 1990 at the IPCC in Kobe, Japan. But it is a truly valuable and constructive organization. It has thrived from the outset, fostering its aims of scientific communication and co-operation within our expanding field of pigment-cell research. It has regularised the IPCC congresses, on a three-yearly basis. Many of us had the pleasure of attending the recent 18th IPCC in Egmond aan Zee, Netherlands. Congratulations once more to Stan Pavel, Nico Smit and their team for organizing on behalf of ESPCR such a first-rate selection of pigment-cell science, together with fine social events including a canal trip in Amsterdam and jam session back in Egmond. Those unable to attend can find the abstracts published as a supplement to *Pigment Cell Research*, and there are plans also to publish a selection of Proceedings in *Pigment Cell Research* during 2003.

We can expect another superb congress in the 19th IPCC, 2005, to be chaired by Vincent Hearing for PASPCR. Plans are impressively well developed already. It will be at the NIH, Bethesda, USA – a memorable visit in itself, and a short Metro ride from the sights of Washington. Before then, you can enjoy attending the annual meetings of your regional Pigment Cell Society – or maybe all three of them, occurring in 2003 in three delightful locations: Cape Cod (Massachusetts) and Ghent (Belgium), both in September, and Tokyo in November. From experience, you can expect excellent science, a constructive and friendly atmosphere and plenty of interaction. Please see the society web sites for information, or contact the organizers, respectively Drs John Pawelek <john.pawelek@yale.edu>, Jean-Marie Naeyaert <JeanMarie.Naeyaert@rug.ac.be> and Genji Imokawa <073733@kastanet.kao.co.jp>.

Another familiar IFPCS activity is to support and promote the journal *Pigment Cell Research*, which under the outstanding editorship of Vincent Hearing (since 2000) has steadily increased its scientific quality, output and Impact Factor (now 2.1) – see also the Editorial in the December issue. You too can easily aid this progress. Just keep submitting good papers, cite recent *PCR* articles, and encourage your library and colleagues to subscribe to the journal. Much gratitude is due also for the continued and generous sponsorship of *PCR* by Johnson & Johnson, L'Oréal, Shiseido and Unilever. Lastly,

congratulations to the new IFPCS Publications Committee, Drs Shibahara, Boissy and Larue, for recently persuading the publisher Blackwell to withdraw a proposed drastic increase in the price of *PCR,* from $95 to $137. Instead the price will increase more gradually, to only $106 in 2003.

The IFPCS's aim of communicating information about our field is of course also well supported by the various Society web pages and Bulletins. The Federation is constantly indebted to our dedicated colleagues who capably provide these resources – Bill Oetting for both IFPCS and PASPCR; Ghanem Ghanem for ESPCR, and Kazu Wakamatsu and Shige Shibahara for JSPCR. Continuing thanks to all of them. Among these pages, please don't forget the IFPCS "InterPig" list of scientific resources for pigmentary research – <www.ifpcs.org> . If you have any such resources to offer that are not listed, now is a great time to send your information to Bill Oetting <bill@lenti.med.umn.edu> or Hiro Yamamoto <hyamamot@mail.cc.tohoku.ac.jp>.

Another useful activity has been the establishment of the IFPCS Special Interest Groups or SIGs <www.ifpcs.org>. These groups aim for more-specific communication within sub-specialities of our field, and some of them have become impressively active. For example satellite meetings were organized at the 2002 IPCC by the SIGs for Melanoma, Pigment Cell Development and Hypo-/Hyperpigmentation. Indeed, the Melanoma Group, chaired by Meenhard Herlyn, has attracted massive interest and is set to transform into a full international society, the Melanoma Research Society, at its meeting in the USA next June. There seems to be a pressing need for such a society, and it is satisfying that the IFPCS could foster this development. More generally, research fields are in constant flux, and IFPCS Council is now reviewing the SIGs, and whether there are areas where new ones may be needed. I would welcome ideas on this from any of you - <dbennett@sghms.ac.uk>. In fact, please contact me at any time, if you have any ideas for improving or adding to any aspect of IFPCS activities.

Another way you can contribute to your Society and Federation is to encourage others in the field to become members. The more researchers taking part in our networks, the more we can all learn and benefit from each other. The more subscriptions, the more invited speakers per conference, and the more travel grants for young scientists. So I urge those in each Society to do all you can to retain and add members, especially in any under-represented fields. You can be assured that your own membership is already promoting these valuable ends. There are many exciting developments in pigment cell research in the post-genomic era, and we should hope for record levels of participation.

Lastly, perhaps I should not ignore the remarkable situation that, after its first election of the new Millennium, the IFPCS has not only its first female President but also its first female Vice-President, while all three Society Presidents are also women. One good consequence is that our female members can now have more confidence that they are in no way excluded from the offices and honours of the Societies. On the other hand, I hope it will not be too long before male/female issues are no longer important, because the balance among scientists will have become equal. Meanwhile, anyone with concerns about such issues can still contact the IFPCS Women Scientists' Committee, the new members of which should be announced shortly in the IFPCS Web Pages.

In conclusion, may I wish all of you a very happy and peaceful year in 2003, with lots of fascinating new findings in pigment cell research.

Best wishes,
Dot Bennett [President, IFPCS]

ESPCR COUNCIL MEETING

Sunday, September 8, 2002
Egmond aan Zee, The Netherlands

Time: 10:00 a.m.-12:00 a.m.
Place: Hotel Zuiderduin, Egmond aan Zee

1- Opening of the Meeting.
The Meeting was opened by Prof. Dorothy Bennett, who welcomed the following Council members: F. Beermann, G. Ghanem, J.-C. García-Borrón, C. Goding, L. Larue, J.-M. Naeyaert, S. Pavel, M. Picardo, and A. Thody.

2- Apologies.
Apologies for absence were received from A. Taïeb and W. Westerhof.

3- Minutes of the 2001 Council Meeting.
The Minutes of the 2001 ESPCR Council Meeting held in Rome, Italy, were circulated, approved without amendments and signed by Prof. Bennett.

4- Secretary's report.
This report included information on four topics: Xth ESPCR Meeting report, membership databases, elections to ESPCR Offices and Council and nominations for the H.S. Raper and T. Takeuchi awards.

a- Xth ESPCR Meeting report. A report on the Xth ESPCR Meeting held in Rome was coordinated by the Secretary and published in the ESPCR Bulletin (December 2001), with a general introduction by Dr. Picardo. Chair persons were contacted, who kindly agreed to write a short summary of the relevant aspects of their session. These contributors were Drs. M. d'Ischia, E. Healy, L. Larue, N. Smit, F. Solano, G. Ghanem, J.-M. Naeyaert and A. Taïeb. Satellite Symposia were not covered, due to lack of time to contact the corresponding chairs. In the light of this first experience, it might be beneficial to set up a standard procedure to coordinate the actions of the Meeting Organizer and the Secretary and ensure that the collaboration of chair persons is engaged in time to cover all activities.
b- Membership databases. The old goal of unifying the existing databases has been finally achieved. The Treasurer's database and the one presented in the Web page are regularly updated and merged. An effort has also been made, mainly by the Treasurer, to complete and update the information on membership, especially concerning contact details and research interests. Complete contact information including email addresses is available for more than 95 % of the membership. Research interests are available for more than 50% of the members.
c- Elections to ESPCR Council and Offices. The term of four Council members, Drs. Friedo Beermann, Mauro Picardo, Anthony Thody and Wiete Westerhof expired this year. Drs. Beermann, Picardo and Westerhof were eligible for re-election. A call for nominations was issued on May 15, with June 15 as deadline. Seven candidates were duly nominated and a formal ballot was launched on July 4. Three procedures for voting were set up: by regular mail, fax, or email. In this case, a secret email vote was made possible thanks to the collaboration of Ms Remedios Rosell, the Departmental Secretary of the ESPCR Secretary. A large majority of the members that voted did so by direct email. The elected candidates were:
- Dr. Friedo Beermann, from the ISREC, Lausanne (Switzerland)
- Dr. Mauro Picardo, from the Dermatological Institute San Gallicano, Rome (Italy)
- Dr. Nico Smit, from the University of Leiden (The Netherlands)
- Prof. Alain Taïeb, from the University of Bordeaux (France)

On the other hand, the term of the current Officers, elected on 2000, expires next year. The ESPCR Council decided that elections should be held one year in advance, to ensure a reasonable overlap

between acting and elected Officers, aiming at an efficient transfer of duties. A call for nominations was issued simultaneously to the one for ESPCR Council. Only one nomination per Office was received, making it unnecessary to proceed to a formal election for any Office. The names of the nominees, whose term will begin in September 2003, was announced by our President in a letter distributed to the membership on July 4. These names are:

- President: Prof. José Carlos García-Borrón (Spain)
- Secretary: Prof. Jean-Marie Naeyaert (Belgium)
- Treasurer: Dr. Patrick Verrando (France)

d- Awards. During this year ESPCR needed to select candidates for two awards. The H.S. Raper Medal was established by the ESPCR, to recognize "outstanding contributions to the biochemistry and molecular biology of pigmentation". For selection of the Medallist, each regional society nominates a candidate. The ESPCR candidate is chosen by the ESPCR Council from the names submitted by the membership to the Secretary. The awardee is then selected by the ESPCR Awards Committee from the nominations of all three Societies. Previous Medallists are J. Pawelek (1993), G. Prota (1996) and K. Jimbow (1999).

The Takeuchi Medal is awarded by the JSPCR as an international recognition of "outstanding contributions to the molecular biology of pigmentation". The JSPCR Awards Committee selects the Medallist from nominations received from each regional Society. The ESPCR nominee is selected by the Council, according to the votes of membership. Previous awardees were V. Hearing and G. Barsh.

According to these rules, votes from the membership were requested by mail on January 8 (deadline for reception February 8). Nominations were forwarded to the Council for voting, and then communicated by the President to the corresponding Committees. The 2002 awardees are:

- HS Raper Medal: Prof. Anthony Thody
- Takeuchi Medal: Profs. Shigeki Shibahara and Masayoshi Tachibana.

5- Treasurer's report.

This was delivered by Dr. L. Larue, who also presented data on membership. The number of members Dr. Larue described the incomes and outgoings, as follows (data given in euros):

This was delivered

has remained approximately stable for the last few years. Every year, between 15 and 20 new members have been recruited, but this does not result in an actual increase of membership, since it is offset by resignations and withdrawal from the lists of those members who did not pay for the last three years. As of September, the Society comprises 195 members, with 19 new members in 2002 and 14 student members. The percentage of female members (approximately 30 %) is not paralleled by a similar distribution in the Council.

Dr. Larue described the incomes and outgoings, as follows (data given in euros):

Balance carried over from 2001:	**3,855.05**
Income 10/2001-09/2002	
Member subscriptions	6,520.00
Pigment Cell Research subscriptions	3,280.00
Donations	0,138.00
Total income	**9,938.00**
Outgoings 9/2001-9/2002	
International Federation of Pigment Cell Societies, subscriptions for 2001	3,062.65
Bulletin and web costs (Prof. Ghanem)	0,600.00

Bank charges CCF	0,323.42
Bank charges Natwest	0,048.23
ESPCR Travel Awards	1,580.00
Pigment Cell Research Subscriptions	3,280.00
Two plaques for honorary members	0,629.81
HS Raper medal	0,031.35
Credit card machine (running budget)	0,206.05
Stamps (gift from the treasurer)	
Total outgoings	**9,761.51**
Balance at 09/02	4,031.54

Dr. Larue noted that the positive balance is stable as compared to last year, but since approximately half of the dues paid by the members must be forwarded to the IFPCS, it appears necessary to discuss the expected expenses for next year, and to seriously consider the possibility of finding corporate sponsors. Without further comments, the Treasurer's report was unanimously accepted.

6. Financial matters: sponsorship and fund raising.

Following the Treasurer's report, Prof. Bennett stated that it would indeed be very desirable to find sponsors to support ESPCR ongoing and new activities. She proposed to appoint a Committee to seek sponsors. This opened the discussion on the possible strategies. Dr. Goding suggested establishing a database with potential sponsors, including contact names. Prof. Pavel pointed that it is desirable to know personally key individuals in the companies to be contacted. He emphasized the difficulties in raising funds for the Society, due to the limited number of companies whose activities are related to pigment cell research, and to the existence of more clinically oriented and related Societies such as the European Society for Dermatologic Research, that are a more interesting target for most potential sponsors. Prof. Naeyaert agreed with this and mentioned the importance of Satellite Meetings, that can be used to gather a clinical audience and attract corporate sponsors. Prof. Thody pointed that other scientific societies have devised an "industrial membership", at a higher rate than regular individual memberships.

Following this discussion, a Committee was appointed, formed by Drs. C. Goding and M. Picardo. The Committee will prepare the database of potential sponsors and send request letters, targeting recurrent sponsorships whenever possible. However, it was made clear that all Council members will collaborate with the Committee, and look for sponsors, within their possibilities. Dr. Larue also mentioned the importance of a close interaction between the fund-raising Committee and the Organizing Committees of ESPCR Meetings.

7- ESPCR Bulletin and Web site report.

This was delivered by Prof. Ghanem. Concerning the Bulletin, as much as 75 hard copies are still printed and mailed, which accounts for most of the associated expenses. This was considered an unreasonably high number of hard copies by the Council. Prof. Naeyaert suggested discontinuing the preparation of a printed Bulletin. A computer printout or a photocopy could be mailed to those requesting a hard copy. This was unanimously accepted. Prof. Ghanem proposed that access to the Bulletin should remain protected and restricted to members in good standing. It was unanimously decided that access to the Bulletin will be denied to those members that did not pay for the last two years.

Prof. Ghanem then moved to the Web site report. He acknowledged the extensive help and the many suggestions from the Officers, notably D. Bennett and L. Larue. The site has been very much improved, with the inclusion of online registration forms, a list of related sites of interest, and frequently updated membership lists. The site registered between 1000 and 2000 hits per month, with an approximate 25% increase after the IPCC site was functional. The issues of security and

confidentiality were then considered, and it was decided that the membership list including contact information will remain password-protected.
Prof. Bennett thanked G. Ghanem on behalf of the Council, and moved on to the next item.

8- Matters relating to the IPCC Meeting.
Prof. Pavel started his report by thanking all those persons who contributed to the organization of the Conference, notably D. Bennett, G. Ghanem and L. Larue. He next presented a provisional financial report. He commented that much effort was needed to find suitable sponsors. However, in spite of some initial uncertainties, the final balance should be slightly positive without the need of a financial input from the ESPCR. The excellent work by the organisers was acknowledged, and Prof. Bennett thanked him on behalf of the ESPCR.

9- Venues for forthcoming ESPCR Meetings; report by the 2003 Organizer.
Prof. Bennett reviewed the venues for the next ESPCR Meetings (Ghent, 2003, organized by Prof. J.-M. Naeyaert and Paris, 2004, organized by Dr. L. Larue), and the XIXth IPCC (Bethesda, 2005, organized by Dr. V. Hearing). She pointed out the need to start discussing the venue for the ESPCR meeting in 2006. Two possibilities were mentioned, Edinburgh or Murcia (or another suitable venue in Spain). It was agreed to explore these possibilities and start the contacts as soon as possible. Prof. Naeyaert then presented a report on the progress of the Ghent Meeting organization. The Meeting will be held in September 17-20, 2003. The first announcement is already prepared, and the scientific program will be completed by the end of October. A Satellite Meeting on Pigmentary Disorders, corresponding to the Biannual Meeting of the Belgian Royal Society of Dermatology, will help to obtain corporate sponsorship, but the local organizing Committee is still looking for further support and will continue to do so in collaboration with Dr. Larue. Arrangements for coordination with *Pigment Cell Research* have also been made and a dedicated Web page (www.espcrgent2003.org) will be operative within a few weeks.

10- Travel and Visiting Scientist Awards.
Dr. Beermann summarized the activities of the Travel Awards Committee. Only two applications for travel awards to attend the XVIIIth IPCC were received in due time. One was financed in full, and the other partially. The question was raised as to the reasons for the drop in the number of applications, as compared to the previous ESPCR meeting. A discussion on the way to publicize the awards and increase the number of applicants followed. It was decided that:

- The Secretary to the ESPCR will send to the membership a reminder, by email, on behalf of the Travel Awards Committee. This should be done in January 2003.

- Another reminder will be included in the brochure announcing the XIth ESPCR Meeting.
Two applications for the Visiting Scientist Awards Program were received and funded.

11- ESPCR Honorary Members.
The Society nominated two new Honorary Members during 2002, Prof. S. Ito and Dr. V. Hearing. The ESPCR has now a total of 8 Honorary Members. Prof. Pavel informed of arrangements to prepare a plaque to be presented to the new Honorary Members during the Gala Dinner. The Council unanimously appreciated the interest of these nominations. Prof. Bennett noted that Council should continue to consider candidates for Honorary Membership, and elect such Members from time to time.

12- Legal Status of the Society.
Prof. Bennett introduced this point by remembering that the issue of the Society's legal status was raised a year ago, following a warning from Dr. Larue, who found difficulties when setting up the new bank accounts in obtaining an official "*siret number*" allowing taxes to be included in invoices and payments. At this stage, it was decided that Prof. García-Borrón will seek advice from his brother, Mr. Alejandro García-Borrón, a lawyer and notary established in Tarragona, Spain.

Prof. García-Borrón then summarized the preliminary conversations. The Society was registered in Naples by Prof. Giuseppe Prota soon after its establishment. The original Constitution stated that the Society shall be dissolved in 2000, unless otherwise decided by the majority of the membership. Accordingly, a vote was performed at this time which supported the continuation of the Society. But no steps were taken to verify whether it was necessary to register the Society again, or whether the original legal registration document is still valid. On informal preliminary conversations, the lawyer offering his help emphasized the difficulties of the situation, mainly due to the likely changes of bank accounts from one EC country to another, and to the fact that the Society is currently under British law, whereas the Presidency and Treasury will move periodically from one European country to another. His first impression was that the easiest solution will be to renew the original registration in Italy, if this was compatible with the Society's needs. But he also mentioned the possibility that the original document could still hold and be valid, depending on its exact wording. Indeed, it is unclear whether the Society ceased to exist and was "created" again following the 2000 constitutional ballot (in which case a new registration may be required), or whether it has been continuously operative. In this last case, and depending on the precise wording of the registration document, a new registration may not be required, and may even be in conflict with the former one. However, Mr. Alejandro García-Borrón felt unable to give any final assessment of the situation before reading the Italian document, and the Constitution of the Society.
Following this report, the Council authorized Prof. García-Borrón to contact Prof. Giuseppe Prota, or another member of the Society in Naples, to obtain a copy of the registration document. This will be forwarded for study, along with the Society's Constitution, to Mr. Alejandro García-Borrón.

13- Guidelines for assigning free Pigment Cell Research subscriptions paid for by the IFPCS.
Prof. Bennett started the discussion by summarizing the current procedure for assigning the 32 free *Pigment Cell Research* subscriptions available to the ESPCR. These are distributed to 1) student members, 2) new members that joined the Society the previous year, 3) ESPCR Bulletin contributors and 4) members from economically less favoured countries. This decision was taken following discussions between the Officers, but has not yet received formal approval from the Council. The Council unanimously approved the procedure, in the order of priority mentioned above, but with the recommendation to allow for flexibility aiming to avoid, whenever possible, the assignment of more than one subscription to a single group or laboratory.

14- Future ESPCR Council Elections. Decision on the number of voting members and on the procedure to follow in case of tied votes.
Prof. Bennett introduced this point by reminding the Council that during the year, in an e-mail vote, they had decided that Prof. Ghanem should remain a member of Council after the expiration in 2002 of his term as an elected member, but now *ex officio* in his capacity of Web master and Bulletin Editor. She raised the question of whether Prof Ghanem should now be a voting or non-voting member. Prof. Ghanem and the rest of Council agreed that it was most appropriate for him to become a non-voting member. This would leave the Council with 10 voting members, thus making a tied vote eventually possible. Therefore, the Council should decide on the number of elected and voting members, which should be taken into account for future elections, and on the opportunity to set up procedures to follow in case of tied votes. A short discussion followed, and it was decided that the total number of Council members should remain 11, according to the current Constitution, with 10 voting members. In spite of the even number of voting members, the possibility of a tied vote was considered unlikely. Therefore, it did not appear necessary to set up a specific procedure for such a situation.

15- Any other business.
Prof. Bennett raised the issue of the fees to be paid by new members joining the Society late in the year. In 2002, and following advice from the President, members enrolled after October 1st were given full membership benefits without paying the subscription fee until the following year, but this needed

approval from the Council. After some discussion on the most pertinent cutoff date, the existing rule was accepted.
Prof. Bennett informed Council of moves to establish a new Pigment Cell Research Society gathering scientists from Asian countries other than Japan.

16- Close of Meeting.
With no other matters to discuss, the Meeting was closed by Prof. Bennett.

ESPCR GENERAL ASSEMBLY

Tuesday, September 10, 2002
Egmond aan Zee, The Netherlands

A General Assembly of the ESPCR took place on Tuesday, September 10, at the Hotel Zuiderduin, in Egmond aan Zee, Holland.

1- Opening of the General Assembly
The Assembly was opened by Prof. Bennett. Agendas and the Minutes of the previous General Assembly, held in Rome, Italy, were distributed to all the members attending the Assembly (18 in total).

2- Approval of the minutes of ESPCR General Assembly in Rome
The Minutes of the previous General Assembly were read and unanimously approved without changes. They were signed by Prof. Bennett.

3- Secretary's report
The Secretary commented on the main activities during 2002. A report on the Xth ESPCR Meeting held in Rome was coordinated by the Secretary and published in the ESPCR Bulletin (December 2001), with a general introduction by Dr. M. Picardo. Chair persons were contacted, who kindly agreed to write a short summary of the relevant aspects of their session. These contributors were Drs. M. d'Ischia, E. Healy, L. Larue, N. Smit, F. Solano, G. Ghanem, J.-M. Naeyaert and A. Taïeb. For future ESPCR Meetings, the Meeting Organizer and the Secretary will coordinate efforts to ensure that the collaboration of chair persons is engaged in time to cover all the relevant activities.
During 2002, the existing ESPCR databases have been finally merged. The database run by the Treasurer and the one presented in the Web page are regularly updated, compared, and completed with new information. Complete contact information including email addresses is available for more than 95 % of the membership. Research interests are available for more than 50% of the membership.
The term of four Council members, Drs. F. Beermann, M. Picardo, A. Thody and W. Westerhof expired this year, making it necessary to proceed to an election. Drs. Beermann, Picardo and Westerhof were eligible for re-election. A call for nominations was issued on May 15, with June 15 as deadline. Seven candidates were duly nominated and a ballot was launched on July 4. Three procedures for voting were set up: by regular mail, fax, or email. In this case, a secret email vote was made possible. A large majority of the members that voted did so by direct email. The elected candidates were:
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On the other hand, the term of the current Officers, elected on 2000, will expire next year. The ESPCR Council decided that elections should be held one year in advance, to ensure a reasonable overlap between acting and elected Officers, aiming at an efficient transfer of duties. A call for nominations was issued simultaneously to the one for ESPCR Council. Only one nomination per Office was

received, and it was not necessary to proceed to a formal election. The names of the nominees, whose term will begin in September 2003, was announced by our President in a letter distributed to the membership on July 4. These names are:

- President: Prof. José Carlos García-Borrón (Spain)
- Secretary: Prof. Jean-Marie Naeyaert (Belgium)
- Treasurer: Dr. Patrick Verrando (France)

During this year ESPCR needed to select candidates for two awards. The H.S. Raper Medal was established by the ESPCR, to recognize "outstanding contributions to the biochemistry and molecular biology of pigmentation". The Takeuchi Medal is awarded by the JSPCR as an international recognition of "outstanding contributions to the molecular biology of pigmentation". Nominations from the membership were requested by mail on January 8 (deadline for reception February 8). Nominations were forwarded to the Council for voting, and then communicated by the President to the corresponding Awards Committees, who selected the following awardees:

- HS Raper Medal: Prof. Anthony Thody
- Takeuchi Medal: Drs. Shigeki Shibahara and Masayoshi Tachibana.

There were no further questions or comments from the audience. Prof. Bennett thanked the Secretary and moved to the next item.

4- Treasurer's report

This report included detailed data on the membership, and was delivered by Dr. Larue. As of September, the Society comprises 195 members, with 19 new members in 2002 and 14 student members. Therefore, the number of members has remained approximately stable for the last few years. Dr Larue described the incomes and outgoings, as follows (data given in euros):

Balance carried over from 2001:	**3,855.05**
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Credit card machine (running budget)	0,206.05
Stamps (gift from the treasurer)	
Total outgoings	9,761.51
Balance at 09/02	**4,031.54**

Dr. Larue noted that the positive balance is stable as compared to last year. Prof. Bennett thanked the Treasurer for this summary, and the report was unanimously accepted.

Before moving on to the next item, Prof. Bennett summarized the discussion in the Council Meeting concerning the need to find corporate sponsors, and informed on the appointment of an ad-hoc Committee formed by Drs. C. Goding and M. Picardo.

5- ESPCR Bulletin and Web site report

This was delivered by Prof. Ghanem, who commented on the large number of hard copies of the ESPCR Bulletin that are still printed and mailed, and on the decision of the Council to discontinue the preparation of a printed Bulletin. A computer printout or a photocopy will be mailed to those requesting a hard copy. Access to the Bulletin will remain protected, restricted to members in good standing, and denied to those members that did not pay for the last two years.

Prof. Ghanem then moved to the Web site report. He acknowledged the help and numerous suggestions from the Officers, notably D. Bennett and L. Larue. He reviewed recent improvements, including online registration forms, a list of related sites of interest, and frequently updated membership lists. The site registered between 1000 and 2000 hits per month, but the exact number of hits is impossible to determine owing to differences in the routes to access the Web page. The issues of security and confidentiality discussed by the Council were then considered, with the decision that the membership list including contact information will remain password-protected.

After some discussion on the pertinence of minor layout changes on the Web page, Prof. Bennett thanked G. Ghanem, and moved on to the next item.

6- Election of Officers, Council Members and new Council composition

This was very briefly summarized by Profs. Bennett and García-Borrón, since most of the relevant information had already been given under item 3. The Assembly was reminded of the new composition of the Council, effective after approval by the General Assembly, which is: F. Beermann (Lausanne), D. Bennett (London), G. Ghanem (Brussels), J.-C. García-Borrón (Murcia), C. Goding (Oxted), L. Larue (Paris), J.-M. Naeyaert (Ghent), S. Pavel (Leiden), M. Picardo (Rome), N. Smit (Leiden) and A. Taïeb (Bordeaux).

7- Number of voting members in the ESPCR Council

Prof. Bennett explained the situation arising from the fact that Prof. Ghanem, in his capacity of Web Master and Bulletin Editor, has become an *ex officio,* non-voting Council member. She summarized the discussion during the Council Meeting, and the decision that the total number of Council members should remain 11, according to the current Constitution, with 10 voting members. Prof. Bennett asked for approval by the General Assembly for this change in the rule governing Council composition. This was unanimously approved by the General Assembly.

8- Any other business

No further business was raised.

9- Close of Assembly

With no other matters to discuss, the General Assembly was then closed by Prof. Bennett.

SECOND ESPCR COUNCIL MEETING

Tuesday, September 10, 2002
Egmond aan Zee, The Netherlands

A meeting of the new ESPCR Council took place immediately after the General Assembly, and was attended by the following Council members: F. Beermann, D. Bennett, G. Ghanem, J.-C. García-Borrón, C. Goding, J.-M. Naeyaert, S. Pavel, M. Picardo, N. Smit and A. Taïeb.

1- Opening of the Meeting

Prof. Bennett opened the meeting and presented apologies for absence from Dr. Larue.

2- Constitution of the new Council
A quorum was declared present and the new Council was officially constituted.

3- Any other business
Prof. Pavel asked whether the Council Meeting to be held on the occasion of the next ESPCR Meeting in Ghent was already scheduled. Prof. Naeyaert informed that the meeting was indeed planned for the day before the opening of the XIth ESPCR Meeting, in the afternoon.
Prof. Naeyaert then asked if it was already possible to estimate the financial support of the ESPCR to the organization of the Ghent Meeting. Prof. Bennett replied that a precise figure could not still be given, and will depend on the financial status and on the availability of donations.

4- Close of Meeting
With no other matters to discuss, the meeting was closed by Prof. Bennett.

Financial report 2002 – ESPCR

(Given in Euros €)

Number of members at 9/2002:	**195**
New members in 2002:	19
Regular members	13
Student members	06
Members who paid subscription up to 9/2002:	
Regular members	99
Student members	14
Honorary members	08
	in €
Balance carried over from 2001:	**3,855.05**
Income 10/2001-09/2002	
Member subscriptions	6,520.00
Pigment Cell Research subscriptions	3,280.00
Donations	0,138.00
Total income	**9,938.00**
Outgoings 9/2001-9/2002	
International Federation of Pigment Cell Societies, subscriptions for 2001	3,062.65
Bulletin and web costs (Prof. Ghanem)	0,600.00
Bank charges CCF	0,323.42
Bank charges Natwest	0,048.23
ESPCR Travel Awards	1,580.00

Pigment Cell Research Subscriptions	3,280.00
Two plaques for honorary members	0,629.81
HS Raper medal	0,031.35
Credit card machine (running budget)	0,206.05
Stamps (gift from the treasurer)	
Total outgoings	**9,761.51**
Balance at 09/02	4,031.54

L. Larue
Treasurer

1. Biology of pigment cells and pigmentary disorders

(Dr. M. Picardo)

The molecular mechanisms underlying the apoptotic process check-points were investigated by **J Shang** with particular attention to NF-□B and Bcl-2 family. The author showed an increased basal level of NF-□B in the melanocyte cultures resistant to the TNF-□-induced apoptosis. In the same cultures no correlation was found between apoptosis sensitivity and TNFR1 or Bax expression. On the contrary, a strong direct correlation existed between the apoptosis susceptibility and the degree of pigmentation, indicating that increased melanogenesis gives a high level of oxidative stress with a subsequent NF-□B activation and trascription of the antiapoptotic factors. Moreover, NF-□B appears to be implicated in the melanocytes and keratinocytes UV-induced damage. At this regard the same author (**J Shang**), in a different paper, evaluated the NF-□B activity by EMSA after UVA irradiation. The in vitro data obtained indicated that NF-□B activity was increased by UVA in keratinocytes but not in melanocytes. On the other hands, L-ascorbic acid lowered the NF-□B activity both in irradiated and not irradiated melanocytes, whereas it worked in a opposite manner on keratinocytes. These results can suggest a different redox regulation and a photoprotective action in melanocytes and keratinocytes.
The factors influencing in vitro the proliferation and the differentiation of the melanocytes were analysed by **T Hirobe** who suggested that LIF (leukaemia inhibitory factor), secreted by the keratinocytes, induces both the phenomena, cooperating with cAMP elevator and bFGF. The same author (**T Hirobe**), in a following paper, with the aim to better understand the role of the keratinocytes utilized melanocytes/keratinocytes cocultures, and the corresponding pure cultures, in a irradiation or not condition. The results obtained (irradiated, more than non irradiated, keratinocytes stimulated the melanocytes proliferation whereas the irradiated and non irradiated melanocytes reacted in a similar manner to keratinocytes) indicated a pivotal role for keratinocytes. The cellular mechanism underlying the UVB-induced pigmentation was further investigated by **R Furuya**. The author evaluated the proliferative activity of melanoblasts and melanocytes after UVB irradiation. The in vitro data indicated that in hyperpigmented cells the proliferation was suppressed whereas in normal or hypopigmented cells proliferative activity was increased. **Y Wang** demonstrated that t-PA (tissue plasminogen activator) was released by normal uveal melanocytes and could be involved in intraocular matrix remodelling and fibrinolysis. The level of t-PA was detected by WB analysis.
I Winer produced experimental evidences for a pivotal role of 12-lipoxygenase (12-LOX) in melanoma invasion and metastasis. He found, by immunohistochemestry on paraffin-embedded tissue, an increased expression of 12-LOX in dysplastic naevi and melanoma with respect to normal skin. These results were in agreement with other data indicating, in highly metastatic melanoma, an increased concentration of 12(S)HETE, a 12-LOX product able to induce the expression of the integrins and adhesion molecules, to modify the cytoskeletal arrangement, and to regulate the apoptotic process. The role of endothelin-1 (ET-1)/endothelin-B (ET_B) interaction in melanoma growth was investigated by **S Jamal**. The author demonstrated that the activation of ET-1/ET_B pathway down regulated - by caspase-8 activation without activation of executioner caspases - E-cadherin, a suppressor of melanoma progression. The lack of the executioner caspases avoided the apoptotic death. The ET-1 secretion by keratinocytes induced by UVB ($2mJ/cm^2$) or TNF-□ treatment was able to down regulate E-cadherin on melanocytes. The half dose ($1mj/cm^2$) induced ET-1 secretion without E-cadherin down regulation. ET-1, produced also by endothelial cells, could then promote the proliferation and progression of the melanoma cells even when these cells invade the dermis.
R Sturm reviewed the different factors involved in the skin colour definition and their link with the susceptibility to cancer development. In particular, he considered the MC1R polymorphism (Arg151Cys, Arg160Trp, Asp294His) and its correlation with red hair/fair skin, melanoma, and non melanoma skin cancer. Moreover, the author evaluated the possible link between MC1R and CDKN2A mutations and risk for familial melanoma, showing an increase of penetrance from the 50% to the 83% in the subjects carrying both the mutations. Finally, the author suggested a possible convergent pathway to explain the multiple factors involved in the definition of the susceptibility to skin cancer. Moreover, **JK Wagner** studied the correlation between the constitutive pigmentation and the response to UV irradiation.
Won Suk Han presented data on the effects of C2-ceramide on a melanoma cell line, demonstrating an arrest of cell growth, by MTT test and flow cytometric analysis of cell cycle, an inhibition of Akt and a transient inhibition of ERK, by WB. However, C2-ceramide did not affected the caspase 3 level suggesting an apoptotic-independent cell growth arrest pathway.
The control of hyperpigmentation is another argument evaluated in some publications. **T Yamamura** studied the possibility of inhibiting in vitro the melanogenic process by mean of the hydrocoumarin. The author found that some hydrocoumarin derivatives, substances with antioxidant property, and □-tocopherol inhibited melanogenesis, as indicated by the spectrophotometric measure of melanin, in normal melanocytes without affecting the melanin synthesis in a cell free

system. In vitro hydrocoumarins and □-tocopherol increased also the GSH intracellular content accelerating its synthetic rate. The antimelanogenic activity of the coumarins could be then due to the GSH synthesis induction rather than the tyrosinase inhibition, similarly to □-tocopherol. On the other hands, **S Choi** demonstrated in vivo that aloesinin, in a dose-dependent manner, was capable of inhibiting the tyrosinase activity, and then the pigmentation, UV-induced. The enzymatic mechanism of this inhibition was clarified by **K Jones** who indicated a competitive pathway. Whereas the melanogenesis and its defects were constantly analysed, less is know about the regulation of dendrite formation. At this regard, **G Scott** presented a review concerning the structure, hormonal regulation and molecular mediators of melanocyte dendrite formation.
Since several years **KU Schallreuter** studied the pathogenesis and the possible therapeutical approaches of the vitiligo. In the presented paper she evaluated the UV photodamage and the risk of non melanoma cancer in the vitiligo patients. The photodamage was assessed on the basis of the histological signs. The author confirmed the absence of an increased susceptibility to UV damage and to non melanoma cancer risk in vitiligo skin, and she explained these results as due to the recently reported over expression of p53 in vitiligo.

- Choi S, Lee SK, Kim JE, Chung MH.
  Aloesin inhibits hyperpigmentation induced by UV radiation. Clin Exp Dermatol 27(6): 513-5, 2002.

- Furuya R, Akiu S, Ideta R, Naganuma M, Fukuda M, Hirobe T.
  Changes in the proliferative activity of epidermal melanocytes in serum-free primary culture during the development of ultraviolet radiation B-induced pigmented spots in hairless mice. Pigment Cell Res 15(5): 348-56, 2002.

- Han WS, Yoo JY, Youn SW, Kim DS, Park KC, Kim SY, Kim KH.
  Effects of C2-ceramide on the Malme-3M melanoma cell line. J Dermatol Sci 30: 10-19, 2002.

- Hirobe T.
  Role of leukaemia inhibitory factor in the regulation of the proliferation and differentiation of neonatal mouse epidermal melanocytes in culture. J Cell Physiol 192(3): 315-26, 2002.

- Hirobe T, Furuya R, Akiu S, Ifuku O, Fukuda M.
  Keratinocytes control the proliferation and differentiation of cultured epidermal melanocytes from ultraviolet radiation B-induced pigmented spots in the dorsal skin airless mice. Pigment Cell Res 15(5): 391-9, 2002.

- Jamal S, Schneider RJ.
  UV-induction of keratinocytes endothelin-1 downregulates E-cadherin in melanocytes and melanoma cells. J Clin Invest 110: 443-52, 2002.

- Jones K, Hughes J, Hong M, Jia Q, Orndorff S.
  Modulation of melanogenesis by aloesin: a competititve inhibitor of tyrosinase. Pigment Cell Res 15(5): 335-40, 2002.

- Schallreuter KU, Tobin DJ, Panske A.
  Decreased photodamage and low incidence of non-melanoma skin cancer in 136 sun-exposed caucasian patients with vitiligo. Dermatol 204(3): 194-201, 2002.

- Scott G.
  Rac and rho: the story behind melanocyte dendrite formation. Pigment Cell Res 15(5): 322-30, 2002.

- Shang J, Eberle J, Geilen CG, Hossini AM, Fecker LF, Orfanos CE, Tebbe B.
  The role of nuclear factor kB and melanogenesis in tumor necrosis factor alpha-induced apoptosis of normal human melanocytes. Skin Pharmacol Appl Skin Physiol 15: 321-29, 2002.

- Shang J, Schwarz C, Sanchez Ruderisch H, Hertting T, Orfanos CE, Tebbe B.
  Effects of UVA and L-ascorbic acid on nuclear factor kB in melanocytes and in HaCaT keratinocytes. Skin Pharmacol Appl Skin Physiol 15: 353-9, 2002.

- Sturm RA.
  Skin colour and skin cancer-MC1R, the genetic link. Melanoma Res 12: 405-16, 2002.

- Tsukamoto K, Osada A, Kitamura R, Ohkouchi M, Shimada S, Takayama O.
  Approaches to repigmentation of vitiligo skin: new treatment with ultrasonic abrasion, seed-grafting and psoralen plus ultraviolet a therapy. Pigment Cell Res 15(5): 331-4, 2002.

- Wagner JK, Parra EJ, Norton LH, Jovel C, Shriver MD.
Skin responses to ultraviolet radiation: effects of constitutive pigmentation, sex, and ancestry. Pigment Cell Res 15(5): 385-90, 2002.

- Wang Y, Hu DN, McCormick SA, Savage HE, O'Rourke J.
Tissue plasminogen activator is released into cultured medium by cultured human uveal melanocytes. Pigment Cell Res 15(5): 373-8, 2002.

- Winer I, Normolle DP, Shureiqi I, Sondak VK, Johnson T, Su L, Brenner DE.
Expression of 12-lipoxygenase as a biomarker for melanoma carcinogenesis. Melanoma Res 12: 429-34, 2002.

- Yamamura T, Onishi J, Nishiyama T.
Antimelanogenic activity of hydrocoumarins in cultured normal human melanocytes by stimulating intracellular glutathione synthesis. Arch Dermatol Res 294: 349-54, 2002.

2. MSH, MCH, other hormones, differentiation

(Dr. B. Loir)

- Aoki H, Moro O.
Involvement of microphthalmia-associated transcription factor (MITF) in expression of human melanocortin-1 receptor (MC1R). Life Sci. 71(18):2171-9, 2002.

- Bogenrieder T, Herlyn M.
Cell-surface proteolysis, growth factor activation and intercellular communication in the progression of melanoma. Crit Rev Oncol Hematol. 44(1):1-15, 2002. Review

- Hoogduijn MJ, Ancans J, Suzuki I, Estdale S, Thody AJ.
Melanin-concentrating hormone and its receptor are expressed and functional in human skin. Biochem Biophys Res Commun. 296(3):698-701, 2002.
Summary: "Stimulation of cultured human melanocytes with MCH reduced the alpha-MSH-induced increase in cAMP production. Furthermore, the melanogenic actions of alpha-MSH were inhibited by MCH." The authors propose that "the MCH/MCHR1 signalling system is present in human skin and may have a role with the melanocortins in regulating the melanocyte."

- Miao Y, Owen NK, Whitener D, Gallazzi F, Hoffman TJ, Quinn TP.
In vivo evaluation of 188Re-labeled alpha-melanocyte stimulating hormone peptide analogs for melanoma therapy. Int J Cancer 101(5):480-7, 2002.

- Robinson SJ, Healy E.
Human melanocortin 1 receptor (MC1R) gene variants alter melanoma cell growth and adhesion to extracellular matrix. Oncogene 21(52):8037-46, 2002.
Comments: "B16G4F melanoma cells, which are functionally null at Mc1r, were stably transfected with wild type and variant (Arg151Cys, Arg160Trp, and Asp294His) human MC1R." alphaMSH modulated the intracellular cAMP, binding to fibronectin and growth of the wild type MC1R transfected cells. At similar MC1 receptor numbers per cell, these effects were not observed in the variant MC1R transfected clones. Therefore, the authors suggest "an alternative non-pigmentary mechanism whereby MC1R variants could modify melanoma susceptibility or progression."

- Scott MC, Suzuki I, Abdel-Malek ZA.
Regulation of the human melanocortin 1 receptor expression in epidermal melanocytes by paracrine and endocrine factors and by ultraviolet radiation. Pigment Cell Res. 15(6):433-9, 2002.

- Sturm RA.
Skin colour and skin cancer - MC1R, the genetic link. Melanoma Res. 12(5):405-16, 2002.

- Widlund HR, Horstmann MA, Price ER, Cui J, Lessnick SL, Wu M, He X, Fisher DE.
Beta-catenin-induced melanoma growth requires the downstream target Microphthalmia-associated transcription factor. J Cell Biol. 158(6):1079-87, 2002.

3. Photobiology

(Dr. E. Wenczl)

- Campos EI et al.
The novel tumour suppressor gene ING1 overexpressed in human melanoma cell lines. Br J Dermatol 146:574-580, 2002.

- Chan J et al
Absence of ras gene mutations in UV-induced malignant melanomas correlates with a dermal origin of melanocytes in Monodelphis domestica. Cancer Lett. 184:73-80, 2002.

- Cheung KJ jr et al
p33 (ING1) enhances UVB-induced apoptosis in melanoma cells. Exp Cell Res 279:291-298, 2002.

- Ortonne JP
Photobiology and genetics of malignant melanoma. Br J Dermatol 61:11-16, 2002.

- Recio JA et al
Ink4a/Arf deficiency promotes ultraviolet radiation-induced melanomagenesis. Cancer Res 62:6724-6730, 2002.

- Scott MC et al.
Human melanocortin 1 receptor variants, receptor function and melanocyte response to UV radiation. J Cell Sci 115:2349-2355, 2002.

4. Neuromelanins

(Prof. M. d'Ischia)

Six papers by Usunoff et al. (2002), Zecca et al. (2001, 2002), Smythies et al. (2002), Double et al. (2002) and Collins et al. (2002) provide a useful and up-to-date panorama of current knowledge and views of neuromelanin localization, structure, synthesis and molecular behaviour. Although surrounded by some persisting uncertainties, the picture that emerges corroborates the view of neuromelanin as subserving a dual role. It can be neuroprotective by acting as a binding agent sequestering redox active metal ions and toxins and preserving important biological targets. However, when the buffering capabilities toward heavy metals and environmental and endogenous toxins are exhausted, the overloading of neuromelanin in neurons may trigger inflammatory and degenerative processes aggravating the underlying pathological condition. In this setting, the role of quinone precursors and other potentially toxic metabolites of dopamine has been underscored. Additional most relevant papers deal with the structural characterization of human mesencephalic neuromelanin by magnetic measurements (Bolzoni et al., 2002), a study of the toxicity of dopamine melanin to dopaminergic cell cultures (Nguyen, A. et al., 2002) and a patent reporting methods for early detection of neurodegenerative diseases, such as Parkinson's disease (Double et al., 2002).

- Bolzoni F., Giraudo S., Lopiano L., Bergamasco B., Fasano M., Crippa P. R.
Magnetic investigations of human mesencephalic neuromelanin. Biochimica et Biophysica Acta 1586(2), 210-218, 2002.

- Collins Michael A., Neafsey Edward J.
Potential neurotoxic "agents provocateurs" in Parkinson's disease. Neurotoxicology and Teratology 24(5),571-577, 2002.

- Double K.L., Ben-Shachar D., Youdim M.B.H., Zecca L., Riederer P., Gerlach M.
Influence of neuromelanin on oxidative pathways within the human substantia nigra. Neurotoxicology and Teratology 24(5), 621-628, 2002.

- Double Kay Rowe Dominic B., Gerlach Manfred, Riederer Peter.
Detection of neurodegenerative disorders by testing for an indicator of neuromelanin release. PCT Int. Appl. 32 pp., 2002.

- Nguyen A., Gille G., Moldzio R., Hung S.-T., Rausch W.-D.
Synthetic neuromelanin is toxic to dopaminergic cell cultures. Journal of Neural Transmission 109(5-6), 651-661, 2002.

- Smythies John, De Iuliis Angela, Zanatta Lucia, Galzigna Lauro.
The biochemical basis of Parkinson's disease: The role of catecholamine o-quinones: A review-discussion. Neurotoxicity Research 4(1), 77-81, 2002.

- Usunoff K.G., Itzev D.E., Ovtscharoff W.A., Marani E.
Neuromelanin in the human brain: a review and atlas of pigmented cells in the substantia Nigra. Archives of Physiology and Biochemistry 110(4), 257-369, 2002.

- Zecca L., Tampellini D., Gerlach M., Riederer P., Fariello R.G., Sulzer D.
Substantia nigra neuromelanin: structure, synthesis, and molecular behaviour. Molecular Pathology 54(6), 414-418, 2001.

- Zecca L., Tampellini D., Gatti A., Crippa R., Eisner M., Sulzer D., Ito S., Fariello R., Gallorini, M.
The neuromelanin of human substantia nigra and its interaction with metals. Journal of Neural Transmission 109(5-6), 663-672, 2002.

5. Genetics, molecular and developmental biology

(Dr. F. Beermann)

- Aoki H, Moro O.
Involvement of microphthalmia-associated transcription factor (MITF) in expression of human melanocortin-1 receptor (MC1R). Life Sci 71(18):2171-2179., 2002.

- Barral DC, Ramalho JS, Anders R, Hume AN, Knapton HJ, Tolmachova T, Collinson LM, Goulding D, Authi KS, Seabra MC.
Functional redundancy of Rab27 proteins and the pathogenesis of Griscelli syndrome. J Clin Invest 110(2):247-257., 2002.
Abstract: Griscelli syndrome (GS) patients and the corresponding mouse model ashen exhibit defects mainly in two types of lysosome-related organelles, melanosomes in melanocytes and lytic granules in CTLs. This disease is caused by loss-of-function mutations in RAB27A, which encodes 1 of the 60 known Rab GTPases, critical regulators of vesicular transport. Here we present evidence that Rab27a function can be compensated by a closely related protein, Rab27b. Rab27b is expressed in platelets and other tissues but not in melanocytes or CTLs. Morphological and functional tests in platelets derived from ashen mice are all within normal limits. Both Rab27a and Rab27b are found associated with the limiting membrane of platelet-dense granules and to a lesser degree with alpha-granules. Ubiquitous transgenic expression of Rab27a or Rab27b rescues ashen coat color, and melanocytes derived from transgenic mice exhibit widespread peripheral distribution of melanosomes instead of the perinuclear clumping observed in ashen melanocytes. Finally, transient expression in ashen melanocytes of Rab27a or Rab27b, but not other Rab's, restores peripheral distribution of melanosomes. Our data suggest that Rab27b is functionally redundant with Rab27a and that the pathogenesis of GS is determined by the relative expression of Rab27a and Rab27b in specialized cell types.

- Baxter LL, Pavan WJ.
The oculocutaneous albinism type IV gene Matp is a new marker of pigment cell precursors during mouse embryonic development. Mech Dev 116(1-2):209-212., 2002.
Summary: *Matp* is the gene mutated in human OCAIV, and located at the mouse *underwhite* locus and the Medaka *b*-locus. Expression of *Matp* in the mouse is similar to Dct and Tyrp1, and is found in the RPE at E9.5 and in migrating melanoblasts at E10.5. Furthermore, Matp expression is downregulated in Mitf-mutant mice.

- Chen Y, Samaraweera P, Sun TT, Kreibich G, Orlow SJ.
Rab27b association with melanosomes: dominant negative mutants disrupt melanosomal movement. J Invest Dermatol 118(6):933-940., 2002.

- De Maziere AM, Muehlethaler K, Van Donselaar E, Salvi S, Davoust J, Cerottini JC, Levy F, Slot JW, Rimoldi D.
The melanocytic protein Melan-A/MART-1 has a subcellular localization distinct from typical melanosomal proteins. Traffic 3(9):678-693., 2002.

- Di Palma F, Belyantseva IA, Kim HJ, Vogt TF, Kachar B, Noben-Trauth K.
Mutations in Mcoln3 associated with deafness and pigmentation defects in varitint-waddler (Va) mice. Proc Natl Acad Sci U S A 99(23):14994-14999., 2002.

- Fang D, Tsuji Y, Setaluri V.
Selective down-regulation of tyrosinase family gene TYRP1 by inhibition of the activity of melanocyte transcription factor, MITF. Nucleic Acids Res 30(14):3096-3106., 2002.
Summary: The authors addressed the question why TYRP1/gp75 transcription is often completely extinguished during melanoma tumor progression. Their data suggest that protein factors that modulate the activity of MITF in melanoma cells repress TYRP1 and presumably other MITF target genes.

- Galy A, Neron B, Planque N, Saule S, Eychene A.
Activated MAPK/ERK kinase (MEK-1) induces transdifferentiation of pigmented epithelium into neural retina. Dev Biol 248(2):251-264., 2002.

- Halaban R, Cheng E, Hebert DN.
Coexpression of wild-type tyrosinase enhances maturation of temperature-sensitive tyrosinase mutants. J Invest Dermatol 119(2):481-488., 2002.

- Hirosaki K, Yamashita T, Wada I, Jin HY, Jimbow K.
Tyrosinase and tyrosinase-related protein 1 require Rab7 for their intracellular transport. J Invest Dermatol 119(2):475-480., 2002.

- Jacobs-Cohen RJ, Wade PR, Gershon MD.
Suppression of the melanogenic potential of migrating neural crest-derived cells by the branchial arches. Anat Rec 268(1):16-26., 2002.

- Kataoka TR, Morii E, Oboki K, Jippo T, Maeyama K, Kitamura Y.
Dual abnormal effects of mutant MITF encoded by Mi(wh) allele on mouse mast cells: decreased but recognizable transactivation and inhibition of transactivation. Biochem Biophys Res Commun 297(1):111-115., 2002.

- King R, Peterson AC, Peterson KC, Mihm MC, Jr., Fisher DE, Googe PB.
Microphthalmia transcription factor expression in cutaneous mast cell disease. Am J Dermatopathol 24(3):282-284., 2002.

- Lister JA.
Development of pigment cells in the zebrafish embryo. Microsc Res Tech 58(6):435-441., 2002.

- Locke MM, Penedo MC, Bricker SJ, Millon LV, Murray JD.
Linkage of the grey coat colour locus to microsatellites on horse chromosome 25. Anim Genet 33(5):329-337., 2002.

- Nechushtan H, Razin E.
The function of MITF and associated proteins in mast cells. Mol Immunol 38(16-18):1177., 2002.

- Nettelbeck DM, Rivera AA, Balague C, Alemany R, Curiel DT.
Novel oncolytic adenoviruses targeted to melanoma: specific viral replication and cytolysis by expression of E1A mutants from the tyrosinase enhancer/promoter. Cancer Res 62(16):4663-4670., 2002.

- Niwa T, Mochii M, Nakamura A, Shiojiri N.
Plumage pigmentation and expression of its regulatory genes during quail development - histochemical analysis using Bh (black at hatch) mutants. Mech Dev 118(1-2):139., 2002.

- Oyehaug L, Plahte E, Vage DI, Omholt SW.
The regulatory basis of melanogenic switching. J Theor Biol 215(4):449-468., 2002.

- Perez-Losada J, Sanchez-Martin M, Rodriguez-Garcia A, Sanchez ML, Orfao A, Flores T, Sanchez-Garcia I.
Zinc-finger transcription factor Slug contributes to the function of the stem cell factor c-kit signaling pathway. Blood 100(4):1274-1286., 2002.

- Rajaraman S, Davis WS, Mahakali-Zama A, Evans HK, Russell LB, Bedell MA.
An Allelic Series of Mutations in the Kit ligand Gene of Mice. II. Effects of Ethylnitrosourea-Induced Kitl Point Mutations on Survival and Peripheral Blood Cells of Kitl(Steel) Mice. Genetics 162(1):341-353., 2002.

- Ramalho JS, Anders R, Jaissle GB, Seeliger MW, Huxley C, Seabra MC.
Rapid degradation of dominant-negative Rab27 proteins in vivo precludes their use in transgenic mouse models. BMC Cell Biol 3(1):26., 2002.

- Rizvi TA, Huang Y, Sidani A, Atit R, Largaespada DA, Boissy RE, Ratner N.
A novel cytokine pathway suppresses glial cell melanogenesis after injury to adult nerve. J Neurosci 22(22):9831-9840., 2002.
Abstract: The neural crest gives rise to numerous cell types, including Schwann cells, neurons, and melanocytes. The extent to which adult neural crest-derived cells retain plasticity has not been tested previously. We report that cutting adult mouse sciatic nerve induces pigmentation around nerve fascicles, among muscle bundles, and in the hypodermis. Pigmented cells are derived from adult nerve, because pigmentation occurs even when nerve fragments are grafted into tyrosinase null albino mice. Pigmentation defects are pervasive in patients with neurofibromatosis type 1 (NF1). Mice

hemizygous for Nf1 mutations show enhanced pigmentation after nerve lesion and occasionally form pigmented and unpigmented tumors. The Nf1 nerve and the Nf1 host environment both contribute to enhanced pigmentation. Grafted purified Nf1 mutant glial cells [S100(+)-p75NGFR(+)-GFAP(+)-EGFR(+) or S100(+)-p75NGFR(+)-GFAP(+)-EGFR(-)] mimic nerve-derived pigmentation. The NF1 protein, neurofibromin, is a Ras-GAP that acts downstream of a few defined receptor tyrosine kinases, including [beta-common (beta(c))] the shared common receptor for granulocyte and monocyte colony-stimulating factor, interleukin-3 (IL3), and IL5. Cytokines in the environment have the potential to suppress pigmentation as shown by nerve injury experiments in null mice; when is beta(c) absent or Nf1 is mutant, melanogenesis is increased. Thus, the adult nerve glial cell phenotype is maintained after nerve injury by response to cytokines, through neurofibromin.

- Santiago A, Erickson CA.
Ephrin-B ligands play a dual role in the control of neural crest cell migration. Development 129(15):3621-3632., 2002.

- Shimada A, Fukamachi S, Wakamatsu Y, Ozato K, Shima A.
Induction and characterization of mutations at the b locus of the medaka, Oryzias latipes. Zoolog Sci 19(4):411-417., 2002.

- Sutton R, Gordon-Thomson C, Cree IA, Mason RS, Moore GP.
Tyr-TGFalpha transgenic mice develop ocular melanocytic lesions. Melanoma Res 12(5):435-439., 2002.

- Takata H, Kominami T, Masui M.
Role of cell contact in the specification process of pigment founder cells in the sea urchin embryo. Zoolog Sci 19(3):299-307., 2002.

- Watabe H, Soma Y, Kawa Y, Ito M, Ooka S, Ohsumi K, Baba T, Kawakami T, Hosaka E, Kimura S, Mizoguchi M.
Differentiation of murine melanocyte precursors induced by 1,25-dihydroxyvitamin D3 is associated with the stimulation of endothelin B receptor expression. J Invest Dermatol 119(3):583-589., 2002.

- Widlund HR, Horstmann MA, Price ER, Cui J, Lessnick SL, Wu M, He X, Fisher DE.
Beta-catenin-induced melanoma growth requires the downstream target Microphthalmia-associated transcription factor. J Cell Biol 158(6):1079-1087., 2002.
Shortened abstract: Microphthalmia-associated transcription factor (MITF) modulates melanocyte differentiation and pigmentation, and was recently shown to reside downstream of the canonical Wnt pathway during melanocyte differentiation from pluripotent neural crest cells in zebrafish as well as in mammalian melanocyte lineage cells. Here, we show that beta-catenin is a potent mediator of growth for melanoma cells in a manner dependent on its downstream target MITF. Moreover, suppression of melanoma clonogenic growth by disruption of beta-catenin-T-cell transcription factor/LEF is rescued by constitutive MITF. This rescue occurs largely through a prosurvival mechanism. Thus, beta-catenin regulation of MITF expression represents a tissue-restricted pathway that significantly influences the growth and survival behavior of this notoriously treatment-resistant neoplasm.

- Wilkie AL, Jordan SA, Jackson IJ.
Neural crest progenitors of the melanocyte lineage: coat colour patterns revisited. Development 129(14):3349-3357., 2002.
Summary: Two complementary approaches were used to study the number and organization of precursors of the melanocyte lineage during development, generation of chimeras with *Dct-lacZ* transgenic mice, and a "special" transgenic approach, *Dct-laacZ*, with an inactive lacZ which, with low frequency, can revert to wildtype. In contrast to previous data, chimeric and mosaic embryonic melanoblast patterns suggest that: (1) there is a large number of melanoblast progenitors; (2) there is a pool of melanoblasts in the cervical region; (3) different cell dispersion mechanisms may operate in the head and trunk regions; and (4) there is extensive axial mixing between clones.

- Zheng B, Vogel H, Donehower LA, Bradley A.
Visual Genotyping of a Coat Color Tagged p53 Mutant Mouse Line. Cancer Biol Ther 1(4):433-435., 2002.

6. Tyrosinase, TRPs, other enzymes

- Tie Chi Lei, Victoria M. Virador, Wilfred D. Vieira and Vincent J. Hearing, A.
Melanocyte-Keratinocyte Coculture Model to Assess Regulators of Pigmentation in Vitro. Analytical Biochemistry, Volume 305, Issue 2, Pages 260-268, 2002.

- Leiv Øyehaug, Erik Plahte, Dag I. Våge and Stig W. Omholt.
The Regulatory Basis of Melanogenic Switching. Journal of Theoretical Biology, Volume 215, Issue 4, Pages 449-468, 2002.

- Motonobu Nakamura, Desmond J. Tobin, Beverly Richards-Smith, John P. Sundberg and Ralf Paus.
Mutant laboratory mice with abnormalities in pigmentation: annotated tables. Journal of Dermatological Science, Volume 28, Issue 1, Pages 1-33, 2002.

- Tohru Niwa, Makoto Mochii, Akira Nakamura and Nobuyoshi Shiojiri.
Plumage pigmentation and expression of its regulatory genes during quail development - histochemical analysis using Bh (black at hatch) mutants. Mechanisms of Development, Volume 118, Issues 1-2, Pages 139-146, 2002.

- N. Baurin, E. Arnoult, T. Scior, Q. T. Do and P. Bernard.
Preliminary screening of some tropical plants for anti-tyrosinase activity. Journal of Ethnopharmacology, Volume 82, Issues 2-3, Pages 155-158, 2002.

7. Melanosomes

(Dr. J. Borovansky)

Research attention has recently focused mainly to myosinVa (*Anikster et al, Au&Huang*, *Chen et al, Strom et al*), to Rab proteins (*Anikster et al, Barral et al, Chen et al, Hirosaki et al, Strom et al and Wu et al*) and to their interactions and association with melanosomes. MelanA/MART-1 was reported to have subcellular localization distinct from typical melanosomal proteins (*De Mazière et al*). Melanosome transfer to keratinocytes can be inhibited by niacinamide (*Hakozaki et al*). Two papers describe aged RPE melanosomes - their photoreactivity (*Rózanowska et al*) and their free radical content (*Bilinska et al*). The list of melanin (melanosome) affinity to various compounds was extended by 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (*Hegstad et al*) and by gentamicin (*Wrzesniok et al*). Molecular basis of Griscelli syndrome (*Anikster et al, Barral et al*) and Chediak&Higashi syndrome (*Starcevic et al*) was further investigated. Aberrant melanosomes and their high sulphur content were suggested as predictive markers both of precancerous melanotic lesions and melanoma (*Nagai et al*).

- Anikster Y, Huizing M, Anderson PD, Fitzpatrick DL, Klar A, Gross-Kieselstein E, Berkut Y, Shazberg G, Gahl WA, Hurvitz H.
Evidence that Griscelli syndrome with neurological involvement is caused by mutations in RAB27A, not MYO5A. Am J Hum Genet 71(2): 407-414, 2002.
Comments: Molecular basis of Griscelli syndrome in a Muslim Arab kindred. Patients had normal MYO5 genes but exhibited a homozygous 67.5 kB deletion that eliminated Rab27a mRNA and immunofluorescence detectable protein.

- Au JSY, Huang JD.
A tissue-specific exon of myosin Va is responsible for selective cargo binding in melanocytes. Cell Motil Cytoskel 53(2): 89-102, 2002.
Comments: The amino acid sequence encoded by alternatively spliced exon, exon F, was shown to be necessary for the selective binding of myosin Va to melanosome. In the absence of exon F myosin Va is not targetted to the melanosome, but is localized to the perinuclear region.

- Barral DC, Ramalho JS, Anders R , Hume AN, Knapton HJ, Tolmachova T, Collinson LM, Goulding D, Authi KS, Seabra MC.
Functional redundancy of Rab27 proteins and the pathogenesis of Griscelli syndrome. J Clin Invest 110(2): 247-257, 2002.
Comments: Evidence is presented that Rab27a function can be compensated by a closely related protein Rab27b, which is normally expressed in platelets and other tissues but not in melanocytes. Ubiquitous transgenic expression of Rab27a or Rab27b rescued ashen coat colour and melanocytes exhibited widespread peripheral distribution of melanosomes.

- Bilinska B,Pilawa B, Zawada Z, Wylegala E, Wilczok T, Dontsov AE, Sakina NL, Ostrovsky MA, Ilyasova VB.
Electron spin resonance investigations of human retinal pigment epithelium melanosomes from young and old donors. Spectrochim Acta A 58(10): 2257-2264, 2002.
Comments: The content of free radicals related to melanosome dry weight was higher in melanosomes isolated from older donors than that in melanosomes from younger donors. The content of free radicals calculated per one melanosome was found to be constant and did not depend on the age.

- Catz SD, Johnson JL, Babior BM.
The C2A domain of JFC1 binds to 3'-phosphorylated phosphoinositides and directs plasma membrane association in living cells. Proc Natl Acad Sci USA 99(18): 11652-11657, 2002.

Comments: JFC1 is a C2 domain-containing protein involved in cellular trafficking that binds 3'-phosphoinositides. The C2A domain of JFC1 was demonstrated to be the module responsible for its binding to the plasma membrane via 3'-phosphoinositides.The association of the C2A domain to the membrane was shown to be modulated by calcium. Possible mechanisms for the role of JFC1 in cellular trafficking are discussed.

- Chen YR, Samaraweera P, Sun TT, Kreibich , Orlow SJ

Rab 27b association with melanosomes: Dominant negative mutants disrupt melanosomal movement. J Invest Dermatol 118(6): 933-940, 2002.
Comments: This study demonstrated 1) the presence of Rab27b mRNA in melanocytes and 2)the intrinsic GTPase activity of Rab27b protein. Rab27b colocalized with the melanosome marker TRP1 and with myosin Va at the cell periphery. Rab 27b mutants did not decorate melanosomes and melanosomes in negative mutant-transfected cells redistributed from the cell periphery to the perinuclear region. In addition, diminution in both numbers and length of melanocyte dendrites was observed.

- De Mazière AM, Muehlethaler K, van Donselaar E, Salvi S, Davoust J, Cerottini JC, Lévy F, Slot JW, Rimoldi D.
The melanocytic protein Melan-A/MART-1 has a subcellular localization distinct from typical melanosomal proteins. Traffic 3(9): 678-693, 2002.
Comments: Melanocytic-lineage specific protein Melan-A/MART-1 is highly concentrated in the Golgi area, in particular in TGN, and to a lesser amount at the surface of melanosomes and in melanosomal precursor compartments.. Melan-A detected on melanosomes of all stages accounted for only 12% of total cellular Melan-A. Unlike other melanocyte-specific proteins Melan-A is post-translationally acylated and has relatively short half-life (~3 hrs). It is speculated that Melan-A is involved in the transport of melanosomal components and sorting mechanisms.

- Hakozaki T, Minwalla L, Zhuang J, Chhoa M, Matsubara A, Miyamoto K, Greatens A, Hillebrand GG, Bissett DL, Boissy RE.
The effect of niacinamide on reducing cutaneous pigmentation and suppression of melanosome transfer. Brit J Dermatol 147(1): 20-31, 2002.
Comments: Niacinamide had neither effect on the catalytic activity of tyrosinase nor on melanogenesis in cultured human melanocytes. It inhibite melanosome transfer in a melanocyte/keratinocyte coculture model. In a clinical trial niacinamide significantly decreased sin hyperpigmentation after 4 weeks of treatment with 5% niacinamide moisturizer.

- Hegstad S, Reistad R, Haug LS, Alexander J.
Eumelanin is a major determinant for 2-amino-1-methyl-6-phenylimidazo[4,5-b] pyridine (PhIP) incorporation into hair of mice. Pharmacol &Toxicol 90:333-337, 2002.
Comments: Incorporation of PhIP (a heterocyclic aromatic amine formed during grilling and frying meat with potent mutagenic and carcinogenic potential) into the hair of mice having similar background but various colour was investigated. A linear relationship between the PhIP incorporation and the eumelanin concentration was found.

- Hirosaki K, Yamashita T, Wada I , Jin HY, Jimbow K.
Tyrosinase and tyrosinase related protein 1 require Rab7 for their intracellular transport. J Invest Dermatol 119(2): 475-480, 2002.
Comments: Localization of tyrosinase and TRP-1 in human amelanotic human melanoma cells SK-mel-24 coinfected with recombinant adenoviruses carrying tyrosinase and TRP-1 was studied in the presence and absence of a dominant mutant of Rab7 (Rab7N125I).

- Kimler VA, Taylor JD.
Morphological studies on the mechansims of pigmentary organelle transport in fish xanthophores and melanophores. Microscopy Res Techniques 58(6): 470-480, 2002.

- Nagai N, Lee YJ, Nagaoka N, Gunduz M, Nakano K, Nojima T, Tsujigiwa H, Gunduz E, Siar CH, Nagatsuka H.
Elemental sulphur and alkali elutable melanin detected in oral melanosis and malignant melanoma by energy-filtering transmission electron microscopy. J Oral Pathol Med 31(8): 481-487, 2002.
Comments: Abnormal melanosome morphology and high sulphur content were suggested as predictive markers for the assessment of early or precancerous melanotic leasins and particularly of malignant melanoma.

- Rózanowska M, Korytowski W, Rózanowski B, Skumatz C, Boulton ME, Burke J, Sarna T.
Photoreactivity of aged human RPE melanosomes: A comparison with lipofuscin. Invest Ophthalmol & Visual Sci 43(7): 2088-2096, 2002.
Comments: During blue-light irradiation of melanosomes, a substantial amount of oxygen was taken up and converted into hydrogen peroxide, whereas in irradiated lipofuscin hydrogen peroxide accounted for not more than 3% of oxygen consumed. In contrast to lipofuscin the photoexcited melanosomes did not increase the rate of oxidative reactions in the presence of polyunsaturated lipids or albumin.

- Sköld HN, Aspengren S, Wallin M.
The cytoskeleton in fish melanophore melanosome positioning. Microsc Res Techniq 58(6): 464-469, 2002.

- Sköld HN, Norström E, Wallin M.
Regulatory control of both microtubule- and actin-dependent fish melanosome movement. Pigment Cell Res 15(5): 357-366, 2002.
Comments: Melanosome dynamics in Antarctic cod melanophores under different experimental conditions was analyzed. The obtained data pointed towards a model where both microtubule- and actin-mediated melanosome transport is synchronously regulated during aggregation and dispersion. Immuno-electron microscopy indicated that myosin V was associated with fish melanosomes.

- Starcevic M, Nazarian R, Dell'Angelica FC.
The molecular machinery for the biogenesis of lysosome-related organelles: lessons from Hermansky-Pudlak syndrome. Semin Cell Dev Biol 13(4): 271-278, 2002.
Comments: A review discussing the biochemical and functional properties of the products of the genes identified to be defective in each of different forms of HPS, which include subunits of the AP-3 complex and the novel proteins HPS1p, HPS3p, HPS4p, pallidin and muted.

- Strom M, Hume AN, Tarafder AK, Barkagianni E, Seabra MC.
Family of Rab27-binding proteins. Melanophilin links Rab27a and myosin Va function in melanosome transport. J Biol Chem 277(28): 25423-25430, 2002.
Comments: A novel family of proteins interacting with with Rab27a has been identified. This family includes also melanophilin, a protein shown to be able to associate simultaneously with activated Rab27a and myosin Va via distinct region and to serve as a linker between them. See also *Fukuda et al. (J Biol Chem 277(14): 12432-12436, 2002) and Nagashima et al (FEBS Letters 517(1-3): 233-238, 2002).*

- Wrzesniok D, Buszman E, Karna E, Nawrat P, Palka J.
Melanin potentiates gentamicin-induced inhibition of collagen biosynthesis in human skin fibroblasts. Eur J Pharmacol 446(1): 7-13, 2002.
Comments: Gentamicin was shown to form complexes with synthetic melanin and the association constants were calculated. Gentamicin inhibited DNA and collagen biosynthesis in human skin fibroblasts and melanin augmented the inhibitory actions of gentamicin. The authors came to a conclusion that the association of gentamicin with melanin might explain the organ specifity of gentamicin-induced hearing loss in patients administered this drug but they neglect the fact that melanin in inner ear is inside membrane-limited melanosomes and bound to protein.

- Wu XF, Wang F, Rao K, Sellers JR, Hammer JA.
Rab27a is an essential component of melanosomal receptor for myosin Va. Mol Biol Cell 13(5): 1735-1749, 2002.
Comments: The association of the myosin Va with the melanosome surface depends on the presence of GTPase Rab27a – resident melanosomal membrane protein. Interaction between myosin Va and Rab27a is exon F dependent. The interaction between myosin Va and Rab27a is indirect and an additional protein capable of bridging is required. The recruitment of myosin Va to the melanosome surface is expected to be regulated by factors controlling the nucleotide state of Rab27a. See also *Wu et al (Nature Cell Biology 4(4): 271-278, 2002) and Fukuda et al (J Biol Chem 277(14): 12432-12436, 2002).*

8. Melanoma experimental, Cell culture

(Dr. N. Smit)

Melanocyte cultures
Lyons and O'Brien describe the protective effects of the carotenoid astaxanthin, present in an algal extract, on UVA induced DNA damage. The induced damage was measured by the comet assay in fibroblasts, melanocytes and intestinal cells. It is nicely demonstrated that pretreatment of the cells with astaxanthin or the algal extract significantly protected against the UVA induced DNA damage. Also interesting is the fact that relatively high levels of damage were found in the melanocyte culture as compared to the fibroblasts and intestinal cells. A high sensitivity of the melanin producing melanocytes seems to be in accordance with the results of Marrot et al as published in Photochem Photobiol in 1999.
A complete volume of Skin Pharmacology and Applied Skin Physiology is devoted to the topic of " free radicals and the skin" vol 15, 277-384, 2002. Some other interesting papers in this volume describe the use of carotenoids and other antioxidants for protection of the skin as reviewed by Stahl and Sies. Two papers by Shang et al in this volume describe the effects of TNF-alpha and of UVA irradiation on NFkB in cultured human melanocytes. TNF treatment could result in apoptosis but most of the melanocyte cultures (8/11) were resistant. A strong correlation of pigmentation and resistance to apoptosis was found. Different effects of UVA irradiation on melanocytes and HaCaT keratinocytes were indicated and possible difference in the redox regulation in both cell types were suggested.
Chen et al describe the use of melan-p1 melanocytes, which are null at the p locus. Transfection with the wild type p transcript rescued the melan-p1 melanocytes from the retention of tyrosinase in the endoplasmic

reticulum. In the paper by Halaban et al it is shown that coexpression of wild type tyrosinase with temperature sensitive tyrosinase mutants corrects the mutant conformation defect in an activity-dependent manner. Host melanocytes with wild-type protein were used for expression of the temperature sensitive mutants. This resulted in the exit from the endoplasmic reticulum and further processing in the Golgi.
Au and Huang used mouse melan-a cells to study the function of different myosin Va isoforms. The different isoforms were tagged with a green fluorescent protein in order to examine the intracellular localization. In this study the amino acid sequence of an alternatively spliced exon, exon F was found necessary for binding of Myo Va to melanosomes. Barral et al used cultured mouse melanocytes for transfection with Rab27a and Rab27b and found that this restored the peripheral distribution of melanosomes in ashen melanocytes. The relative expression of Rab27a and 27b in specialized cell types are suggested to determine the pathogenesis of Griscelli syndrome. Nagashima et al describe a complex formation of Rab27a, melanophilin and myosin Va in a human melanocyte cell line HMV-II. A role for melanophilin in bridging Rab27a on melanosomes and myosin Va on actin filaments during melanosome transport is suggested.
In two reviews (Bogenrieder and Herlyn and Li et al) the importance of intercellular communication for melanoma development is emphasized. Importance of intercellular adhesion receptors and expression of proteolytic enzymes for melanoma progression are discussed. Also a possible role for the ephrin/Eph receptor protein kinases in melanoma pathogenesis is considered. In the paper by Santiago and Erickson the role of ephrin-B in the development of neural crest cells is described. Adhesion of melanoblasts on an ephrin-B substratum affected the actin cytoskeleton of the cells by inducing microspike formation. Okubu et al have studied HOXD3, a member of the homeobox genes which are known to regulate cellular motility and cell-cell interactions. HOXD3 was expressed in 6/7 melanoma cell lines and not in normal melanocytes. Microarray comparison of a HOXD3-antisense-transduced melanoma culture with its control indicated that an increased expression of three proteins, all associated with the cytoskeletal system, may be responsible for the reduced motility and invasive activity of the tranduced cells.
Eberle et al show that endothelin 1 reduces the basic apoptotic rates in both normal melanocytes and melanoma cells. Considering upregulation of endothelin receptors in melanoma tumors this antiapoptotic activity may be a crucial step in melanoma progression. In this light the study of Jamal and Schneider may give some additional information how the interaction of endothelin 1 induced by UV in keratinocytes with the ET(B)receptor may contribute to increased risk of melanoma invasion. In this case no direct antiapoptotic effects are described of the ET-1/ET(B) receptor interaction. However the down regulation of E-cadherin: beta-catenin complexes and the association with caspase-8 could play a role in melanoma progression. Another factor that may be involved in melanoma invasion is suggested from the work of Geissinger et al. Using a differential display approach the adhesion protein osteopontin (OPN) was found upregulated in melanocytes stimulated via the Xmrk or FGF receptor. OPN was shown to promote antiapoptotic signaling and may be responsible for improved survival of transformed melanocytes in the dermal environment.

- Aoki H, Moro O.
  Involvement of microphthalmia-associated transcription factor (MITF) in expression of human melanocortin-1 receptor (MC1R). Life Sci. 71:2171-2179, 2002.
- Au JS, Huang JD.
  A tissue-specific exon of myosin Va is responsible for selective cargo binding in melanocytes. Cell Motil.Cytoskeleton 53:89-102, 2002.
- Bandyopadhyay D, Okan NA, Bales E, Nascimento L, Cole PA, Medrano EE.
  Down-regulation of p300/CBP histone acetyltransferase activates a senescence checkpoint in human melanocytes. Cancer Res. 62:6231-6239, 2002.
- Barral DC, Ramalho JS, Anders R, Hume AN, Knapton HJ, Tolmachova T, Collinson LM, Goulding D, Authi KS, Seabra MC.
  Functional redundancy of Rab27 proteins and the pathogenesis of Griscelli syndrome. J.Clin.Invest 110:247-257, 2002.
- Bergh K, Wentzel P, Stjernschantz J.
  Production of prostaglandin e(2) by iridial melanocytes exposed to latanoprost Acid, a prostaglandin f(2alpha) analogue. J. Ocul.Pharmacol.Ther. 18:391-400, 2002.
- Bogenrieder T, Herlyn M.
  Cell-surface proteolysis, growth factor activation and intercellular communication in the progression of melanoma. Crit Rev.Oncol.Hematol. 44:1-15, 2002.
- Borges CR, Martin SD, Meyer LJ, Wilkins DG, Rollins DE.
  Influx and efflux of amphetamine and N-acetylamphetamine in keratinocytes, pigmented melanocytes, and nonpigmented melanocytes. J.Pharm.Sci. 91:1523-1535, 2002.
- Chaubal VA, Nair SS, Mojamdar MV.
  Type I gamma-GT mRNA is Expressed in B16 Melanoma and Levels Correlate with Pigmentation. Pigment

Cell Res. 15:367-372, 2002.

- Chen K, Manga P, Orlow SJ.
Pink-eyed Dilution Protein Controls the Processing of Tyrosinase. Mol.Biol.Cell 13:1953-1964, 2002.

- Deng Y, Yang L, An SL.
Effect of Tribulus terrestris L decoction of different concentrations on tyrosinase activity and the proliferation of melanocytes. Di Yi.Jun.Yi.Da.Xue.Xue.Bao. 22:1017-1019, 2002.

- Dhawan P, Richmond A.
Role of CXCL1 in tumorigenesis of melanoma. J.Leukoc.Biol. 72:9-18, 2002.

- Eberle J, Fecker LF, Orfanos CE, Geilen CC..
Endothelin-1 decreases basic apoptotic rates in human melanoma cell lines. J.Invest Dermatol. 119:549-555, 2002.

- Filadelfi AM, Rodrigues PR, Castrucci AM, Visconti MA.
Adrenoceptors in avian and fish pigment cells. J.Comp Physiol [B] 172:599-606, 2002.

- Furuya R, Akiu S, Ideta R, Naganuma M, Fukuda M, Hirobe T.
Changes in the proliferative activity of epidermal melanocytes in serum-free primary culture during the development of ultraviolet radiation B-induced pigmented spots in hairless mice. Pigment Cell Res. 15:348-35, 2002.

- Galy A, Neron B, Planque N, Saule S, Eychene A.
Activated MAPK/ERK kinase (MEK-1) induces transdifferentiation of pigmented epithelium into neural retina. Dev.Biol. 248:251-264, 2002.

- Geissinger E, Weisser C, Fischer P, Schartl M, Wellbrock C.
Autocrine stimulation by osteopontin contributes to antiapoptotic signalling of melanocytes in dermal collagen. Cancer Res. 62:4820-4828, 2002.

- Halaban R, Cheng E, Hebert DN.
Coexpression of wild-type tyrosinase enhances maturation of temperature-sensitive tyrosinase mutants. J. Invest Dermatol.119:481-488, 2002.

- Han W, Yoo J, Youn S, Kim D, Park K, Kim S, Kim K
Effects of C(2)-ceramide on the Malme-3M melanoma cell line. J.Dermatol.Sci. 30:10, 2002.

- Hirobe T, Furuya R, Akiu S, Ifuku O, Fukuda M.
Keratinocytes control the proliferation and differentiation of cultured epidermal melanocytes from ultraviolet radiation B-induced pigmented spots in the dorsal skin of hairless mice. Pigment Cell Res. 15:391-399, 2002.

- Jamal S, Schneider RJ.
UV-induction of keratinocyte endothelin-1 downregulates E-cadherin in melanocytes and melanoma cells. J.Clin.Invest 110:443-452, 2002.

- Kemkemer R, Schrank S, Vogel W, Gruler H, Kaufmann D.
Increased noise as an effect of haploinsufficiency of the tumor-suppressor gene neurofibromatosis type 1 in vitro. Proc.Natl.Acad.Sci.U.S.A 99:13783-13788, 2002.

- Landen JW, Lang R, McMahon SJ, Rusan NM, Yvon AM, Adams AW, Sorcinelli MD, Campbell R, Bonaccorsi P, Ansel JC, Archer DR, Wadsworth P, Armstrong CA, Joshi HC.
Noscapine alters microtubule dynamics in living cells and inhibits the progression of melanoma. Cancer Res. 62:4109-4114, 2002.

- Li G, Satyamoorthy K, Herlyn M.
Dynamics of cell interactions and communications during melanoma development. Crit Rev.Oral Biol.Med. 13:62-70, 2002.

- Lyons N, O'Brien N.
Modulatory effects of an algal extract containing astaxanthin on UVA-irradiated cells in culture. J.Dermatol.Sci. 30:73, 2002.

- McGill GG, Horstmann M, Widlund HR, Du J, Motyckova G, Nishimura EK, Lin YL, Ramaswamy S,

Avery W, Ding HF, Jordan SA, Jackson IJ, Korsmeyer SJ, Golub TR, Fisher DE.
Bcl2 regulation by the melanocyte master regulator Mitf modulates lineage survival and melanoma cell viability. Cell 109:707-718, 2002.

- Nagashima K, Torii S, Yi Z, Igarashi M, Okamoto K, Takeuchi T, Izumi T.
Melanophilin directly links Rab27a and myosin Va through its distinct coiled-coil regions. FEBS Lett. 517:233-238, 2002.

- Nechushtan H, Razin E.
The function of MITF and associated proteins in mast cells. Mol.Immunol. 2002, 38:1177.

- Okubo Y, Hamada J, Takahashi Y, Tada M, Tsutsumida A, Furuuchi K, Aoyama T, Sugihara T, Moriuchi T.
Transduction of HOXD3-antisense into human melanoma cells results in decreased invasive and motile activities. Clin.Exp.Metastasis 19:503-511, 2002.

- Olsson MJ, Juhlin L.
Long-term follow-up of leucoderma patients treated with transplants of autologous cultured melanocytes, ultrathin epidermal sheets and basal cell layer suspension. Br.J.Dermatol. 147:893-904, 2002.

- Rizvi TA, Huang Y, Sidani A, Atit R, Largaespada DA, Boissy RE, Ratner N.
A novel cytokine pathway suppresses glial cell melanogenesis after injury to adult nerve. J.Neurosci. 22:9831-9840, 2002.

- Salazar-Onfray F, Lopez M, Lundqvist A, Aguirre A, Escobar A, Serrano A, Korenblit C, Petersson M, Chhajlani V, Larsson O, Kiessling R.
Tissue distribution and differential expression of melanocortin 1 receptor, a malignant melanoma marker. Br.J.Cancer 87:414-422, 2002.

- Santiago A, Erickson CA.
Ephrin-B ligands play a dual role in the control of neural crest cell migration. Development 129:3621-3632, 2002.

- Sarkar D, Su ZZ, Lebedeva IV, Sauane M, Gopalkrishnan RV, Valerie K, Dent P, Fisher PB.
mda-7 (IL-24) Mediates selective apoptosis in human melanoma cells by inducing the coordinated overexpression of the GADD family of genes by means of p38 MAPK. Proc.Natl.Acad.Sci.U.S.A 99:10054-10059, 2002.

- Satomi H, Wang B, Fujisawa H, Otsuka F.
interferon-beta from melanoma cells suppresses the proliferations of melanoma cells in an autocrine manner. Cytokine 18:108-115, 2002.

- Schiaffino MV, Dellambra E, Cortese K, Baschirotto C, Bondanza S, Clementi M, Nucci P, Ballabio A, Tacchetti C, De Luca M.
Effective retrovirus-mediated gene transfer in normal and mutant human melanocytes. Hum.Gene Ther. 13:947-957, 2002.

- Scott G.
Rac and rho: the story behind melanocyte dendrite formation. Pigment Cell Res. 15:322-330, 2002.

- Shang J, Eberle J, Geilen CC, Hossini AM, Fecker LF, Orfanos CE, Tebbe B.
The Role of Nuclear Factor-kappaB and Melanogenesis in Tumor Necrosis Factor-Alpha-Induced Apoptosis of Normal Human Melanocytes. Skin Pharmacol.Appl.Skin Physiol 15:321-329, 2002.

- Shang J, Schwarz C, Sanchez RH, Hertting T, Orfanos CE, Tebbe B.
Effects of UVA and L-ascorbic acid on nuclear factor-kappaB in melanocytes and in HaCaT keratinocytes. Skin Pharmacol.Appl.Skin Physiol 15:353-359, 2002.

- Simmons DP, Andreola F, De Luca LM.
Human melanomas of fibroblast and epithelial morphology differ widely in their ability to synthesize retinyl esters. Carcinogenesis 23:1821-1830, 2002.

- Teh MT, Sugden D.
Desensitization of pigment granule aggregation in Xenopus leavis melanophores: melatonin degradation rather than receptor down-regulation is responsible. J.Neurochem. 81:719-727, 2002.

- Wang Y, Hu DN, McCormick SA, Savage HE, O'Rourke J.
Tissue plasminogen activator is released into cultured medium by cultured human uveal melanocytes. Pigment Cell Res. 15:373-378, 2002.

- Watabe H, Soma Y, Kawa Y, Ito M, Ooka S, Ohsumi K, Baba T, Kawakami T, Hosaka E, Kimura S, Mizoguchi M.
Differentiation of murine melanocyte precursors induced by 1,25-dihydroxyvitamin D3 is associated with the stimulation of endothelin B receptor expression. J.Invest Dermatol. 119:583-589, 2002.

- Yamamura T, Onishi J, Nishiyama T.
Antimelanogenic activity of hydrocoumarins in cultured normal human melanocytes by stimulating intracellular glutathione synthesis. Arch.Dermatol.Res. 294:349-354, 2002.
The results suggest that 7-allyl-6-hydroxy-4,4,5,8-tetramethyl hydrocoumarin would be useful as an antimelanogenic agent for the prevention or improvement of skin pigmentation induced by reactive oxygen compounds and free radicals, and may inhibit melanogenesis, including tyrosinase transfer and melanosome differentiation, by interrupting melanization by increasing the intracellular GSH content.

- Yu HS.
Melanocyte destruction and repigmentation in vitiligo: a model for nerve cell damage and regrowth. J.Biomed.Sci. 9:564-573, 2002.

ANNOUNCEMENTS & RELATED ACTIVITIES

Calendar of events

2003 XIth The 7th International Conference on Solar Energy and Applied Photochemistry [SOLAR '03] Combined with the 4th International Training Workshop on Environmental Photochemistry, [ENPHO '03]

Luxor, Egypt, 23-28 February 2003

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South Miami Beach, Florida USA , April 30 - May 4

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2003 XIth 1st Mediterranean Melanoma Meeting

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4, Filellinon Street
GR- 105 57 Athens – Greece
Tel: +30/210/3230380
Fax: +30/201/3245049
Web site: www.panos-travel.gr
E-mail: info@panos-travel.gr
Web site of the meeting: www.panos-travel.gr/mmm

2003 International Symposium on Vitiligo

May 16-17, London, UK

Venue: The Royal College of Physicians, London

Topics will include: The clinical nature of Vitiligo, Genetic Research into Vitiligo, understanding Melanocytes, psychology of vitiligo, autoimmunity and vitiligo.
Contact: Joanna Prendergast
Conference Executive
Hampton Medical Conferences Ltd
127 High Street,
UK - Teddington, Middlesex
Tel: 020 8977 0011
Fax: 020 8977 0055
E-mail: jprendergast@hamptonmedical.co.uk

2003 Third Research Meeting on Melanoma

Milan, Italy, 29-30 May

Contact: Dr Alessandro TESTORI
European Institute of Oncology
Via Ripamonti 435
20141 Milan
Tel: 39 02 57489 493
Fax: 39 02 700501878
E-mail: alessandro.testori@ieo.it
Organizing Secretariat: M.A.F. SERVIZI SRL
Via G.B. Vico 7
10128 Torino
Tel: 39 011 505900
Fax: 39 011 505976
E-mail: melanoma2003@mafservizi.it or Info@mafservizi.it

2003 XIth First Annual Melanoma Research Congress

Philadelphia, 21-24 June

Conference Co-Chairs: M. HERLYN and D. GUERRY
Contact: Sandy PARSONS
The Wistar Institute
3601 Sprude Street
Pholadelphia PA 19104
E-mail: parsons@wistars.upenn.edu

2003 XIth Annual Meeting of the PASPCR

Wood's Hole, Cape Cod, MA, USA MA, September 3-7

Contact: Dr. Jean BOLOGNIA
E-mail: jean_bolognia@qm.yale.edu
Web site:

2003 XIth Meeting of the ESPCR

Gent, Belgium, 17-20 September

Contact: MEDISCON
P.O. Box 113
5660 AC Geldrop
The Netherlands
Tel: +31 (0)40-2852212
Fax: +31 (0)40-2851966
E-mail: mediscon@iae.nl
Web site: www.espcrgent2003.org

2003 14th European Study Group of Lysosomal Diseases - (ESGLD) Workshop

September 18-21, Podebrady, Czech Republic

PLANNED TOPICS OF THE WORKSHOP

Contact: Ms. Barbora VINSOVA
GUARANT Ltd.,
Opletalova 22,
CZ - 110 00 Praha 1
Tel: +420 2 8400 1444 Fax: +420 2 8400 1448
E-mail: esgld@guarant.cz
Web : http://www.ESGLD2003.CZ/

2004 14th International Congress on Photobiology

Jungmoon, Jeju (Cheju), Korea June 10-15

2004 XIIth Annual Meeting of the PanAmerican Society for Pigment Cell Research

June, Orange County, California, USA

Organizers:Dr. Frank MEYSKENS (UC-Irvine) and Dr. Rogers BOWERS (Cal State-LA)
Contact: Dr Frank MEYSKENS
E-mail: flmeyske@uci.edu

2004 XIIth Meeting of the ESPCR

Paris, France

Contact: Dr. Lionel LARUE
E-mail: Lionel.Larue@curie.fr

2005 XIVth International Pigment Cell Conference (IPCC)

Bethesda, USA

Contact: Dr. V. HEARING
E-mail: hearingv@nih.gov

2003 MEMBERSHIP

Dear ESPCR members,

You will find below links to different information to subscribe to ESPCR. Some of you already paid or do not have to pay their fees for 2003, you still can get information concerning the life of your Society.
I wish you a great and successful 2003 year.

All the best,
Lionel Larue
ESPCR Treasurer

1. **Subscription form 2003**
2. **Information form 2003**
3. **Tarif 2003**
4. **Proforma invoice 2003**

NEW MEMBERS

The ESPCR is delighted to welcome the following colleagues to membership and hope they will play a full and active part in the Society.

DELL'ANNA ML.
San Gallicano Dermatological Institute
Cutaneous Physiopathology
Via San Gallicano 25/A
I - 00153 ROMA

DEPREZ P.
Policlinica Estetila
4 Port Grecco
E - 17487 EMPURIABRAVA

VENKATASAMY R.
King's College London
150 Stamford Street
UK - LONDON E12 6PY

From the Editor of Pigment Cell Research

Online journals and PDF files have generated a whole new layer of complexity for copyright issues dealing with journals and publishers. Officially, PDF files that you download (even of your own articles) are copyright restricted documents and you are not legally entitled to distribute them to others without permission of the publisher. Does anyone follow this guideline? Maybe not, but it is wise to be aware of it (does the Napster lawsuit ring a bell with anyone?).

In any case, Blackwell/Munksgaard, the publishers of ***Pigment Cell Research***, have worked out a more streamlined copyright form that authors will be using as of this publication year (2003). It is a bit more complex than the earlier version, but it provides you some liberties previously not allowed, as listed below. If you are interested in seeing the new form, you can find it under the Instructions to Authors on the PCR web site (**www.pigment.org**).

Among other things, now you are allowed to:

1) post PDF files of your publications on your own web site, as long as you identify the source of the original citation (as an Editor's note, this would allow others to log on to your web site and download any PDF files you have at that site).
2) Use Figures you have published in subsequent publications without getting permission from the publishers, again if you identify the source of the original citation.

Do these guidelines apply to all scientific journals and publishers? Probably not, but hopefully they soon will. They certainly do apply to journals published by Blackwell/Munksgaard, which includes many of your favorite dermatology themed journals.

Other things to look forward to in ***Pigment Cell Research*** in 2003 –

- The line-up of scheduled Full Reviews, Pigment Gene Focus Reviews and Innovative Technology Reviews is almost set; they continue the high caliber of reviews you have seen in recent years and you can see those at the 'In Press' hyperlink on the PCR web site.
- The next 3 Bibliographic Reviews will be coming out in the next year or so; Prof. Masako Mizoguchi, Prof. Hans Rorsman and Prof. James J. Nordlund have agreed to write those and I am sure their insights about their research and clinical careers will make for very interesting reading.
- Did you miss the IPCC last September in The Netherlands? If so, or even if you were fortunate enough to attend, you'll be happy to know that a dozen or so selected lectures from that meeting will be highlighted in a special IPCC Proceedings section to be published as supplementary pages in Issue #3 of 2003.

As usual, I welcome all input and suggestions from scientists in the pigment cell community and please feel free to contact me at any time. Let me take this occasion to wish you, your colleagues and your family a happy, safe and prosperous 2003.

Vincent Hearing
Editor, ***Pigment Cell Research***