Future ISICR Meetings

Sept. 15, 2007
(History of the Interferons)

Sept. 16-19, 2007
Oxford, UK

ISICR WWW Site

www.ISICR.org

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INTERNATIONAL SOCIETY FOR
INTERFERON AND CYTOKINE RESEARCH
December 2006
Volume 13, No. 3

A Message from the ISICR President

This year, many discoveries related to innate immunity and interferons contributed to a high scientific profile of this field of research. As an academic Society, the ISICR will hopefully benefit from these exciting developments. In any case, the Society is in good shape, and, as I see it, ready to evolve further.

As expected, the new **ISICR Executive Director**, Debra Weinstein, with the

(Continued on Page 2)

Interview with Dr. Howard Young

Hannah Nguyen

It has been a long while since I have been trying to interview Dr. Howard Young, our Editor-in Chief. As many of you probably know he is a very humble man and I had to really twist his arm to finally get something about him in print (actually I had to bribe him with promises of chocolate)! I've always looked up to Howard, because not only is he an excellent scientist, he is involved in a plethora of extracurricular activities geared to encourage young aspiring scientists. I want to especially highlight Howard's "public service" achievements to our readers, as I believe that one's selfless dedication to make a difference to the world in general is a rare and valuable attribute and is equally important, or even more important than the number of scientific discoveries, publications and awards obtained throughout one's career. Howard Young's generosity has earned him

(Continued on Page 3)

*(**Message**, cont. from page 1)*

assistance of Delores Francis, proves to be a great help to the President in efficiently managing the daily Society business. The officers and elected members of the Board of Directors are in frequent contact by email and telephone. They met in Vienna with members of the Advisory Board to discuss Society matters in what was a most efficient Board of Directors' meeting. Likewise the chairpersons of the various ISICR Standing Committees were extremely busy, and dealt efficiently with their important tasks. New members were appointed to some of the Committees, and new International Council Members were elected in several countries. I personally thank all those who contributed and worked for the benefit of our Society during the past year.

Special thanks go to Josef Schwarzmeier and the local organizers of the joint ISICR/ICS Annual Meeting 2006 in Vienna. It is very clear that the conference was a great success with excellent science, a superb organization and a perfect venue. Many positive comments were conveyed to me both during and after the meeting. The tenor was that joint meetings of this kind are very helpful in bringing together the international interferon and cytokine community by generating a sense of friendship and collegiality among scientists. It is only logical that issues regarding the future Annual Meetings, and the fate of the two societies were frequently raised by the participants in the Cytokine 2006 Congress in Vienna.

As you know, there have been many discussions over the years about the advantages and disadvantages of a merger of ISICR with the International Cytokine Society (ICS). The officers of both societies were in favor of entering into discussions to explore the benefits and ramifications of a merger. As a result, a single, strong International Society devoted to interferons and cytokines could emerge. However, there are many issues that need to be addressed beforehand. Therefore, the ISICR Board of Directors decided to ask for a mandate from the General Membership to initiate negotiations for a merger. A ballot among the ISICR members concerning such a mandate took place in August 2006. The outcome was clear-cut. The majority of the ISICR Membership responded (55%) and 91% was in favour to go ahead with negotiations. In my opinion the 55% response rate is encouragingly high, and I would like to thank all of those who voted.

The Board of Directors discussed the issue at its Executive Meeting on August 27, 2006 in Vienna and installed an ISICR Merger Committee. Members of this Committee are Otto Haller, ISICR President; Eleanor Fish, ISICR President Elect; Howard Young, ISICR Past President; Kathy Zoon, Former ISICR President, and Alfons Billiau, a member of both the ISICR and ICS. In addition, discussions took place with representatives of ICS and it was agreed that ICS will also appoint members for a corresponding Merger Committee. The joint ISICR/ICS Merger Committee will propose a constitution and bylaws for a new (merged) Society, and outline all relevant issues for or against a merger for the Membership to consider. We will take great care to preserve in the new constitution what is important to both Societies. This process is likely to take some time in order for there to be due diligence. I will keep you informed of progress.

While 2006 was apparently a good year for ISICR, 2007 may be even better. We will celebrate together the **50th Anniversary of the discovery of interferons**, at our Annual Meeting taking place September 16 to 19, 2007, in Oxford, England. In addition, there will be a **"History of the Interferons" pre-meeting** on September 15, 2007. I recommend that you save these dates on your calendar. It will be a very special occasion, and I am most thankful to Graham Foster, Derek Burke and the 2007 ISICR Meeting Committee for their efforts to make this a most memorable event.

I wish you all the best for 2007, and hope to see you in Oxford.

Otto Haller,
ISICR President
Freiburg, December 1, 2006

*(**Howard Young**, cont. from page 1)*

the 2006 National Public Service Award for "outstanding contributions in public service within and outside of the work environment; the highest standards of excellence, dedication, and accomplishment over a sustained period of time; and creative and highly skilled career management at all levels of public service". He was the first member of the National Cancer Institute to receive the NIH Directors' Award for Mentoring (2000) which he again received in 2006. He has also received two NIH Merit Awards. Here are highlights of his public service accomplishments:

- Development of the prestigious Werner Kirsten Student Intern Program, which brings high school seniors into NCI's laboratories for a year and pairs them with a scientific mentor. He was both the scientific advisor to the program as well as himself a mentor to student interns for many years.
- Development of a summer student seminar series that brings 50-100 students together once a week to hear seminars on current scientific topics. The format includes pizza (it gets them in the room) and gives the students a comfortable environment in which they can interact with guest speakers. Topics cover the research being done in Frederick by both NCI scientists and US Army scientists from USAMRIID. He also gives talks to students on the ethics involved in performing scientific research, and he has developed an on-line scientific ethics course for NIH summer students.
- Mentor and member of the evaluation board of the NCI Introduction to Cancer Research Career Program, which helps expose minority students to biomedical research by placing them in various labs including his own.
- Not surprisingly, Howard also brings humor to his work with young people, with "The Top 12 Rules to Remember for Working in a Laboratory", including: take your work seriously, but not yourself seriously; only work with people who like chocolate; and you can go anywhere you want if you look serious and carry a rack of centrifuge tubes. Plus, according to my sources, there is almost always food in his office that is available to any hungry member of the Laboratory of Experimental Immunology.

This is not counting scientific extracurricular activities and awards, some of which are:

- ISICR President 2004-2005, ISICR Vice-President 2003
- ISICR Newsletter Editor-in-Chief, 1989-present
- Member of over 20 scientific committees, societies or journal editorial boards over the years
- Seven-time (!) recipient of the NIH Technology Transfer Awards
- Former Chair, NIH Cytokine Interest Group and American Society for Microbiology Immunology Division and Co-Chair NIH Immunology Interest Group

On top of it all, Howard has under his belt over 265 publications; he is listed in ISI HighlyCited.com as a highly cited researcher. As Head of the Cellular and Molecular Immunology Section, Laboratory of Experimental Immunology, National Cancer Institute-Frederick, Center for Cancer Research, Howard Young focuses his research on the control of gene expression during the development and maturation of the cellular innate and adaptive immune system in the mediation of antitumor and inflammatory immune responses. His lab aims to use molecular approaches to 1) investigate in detail the mechanisms by which gene expression is regulated in immune effector cells and to 2) study the mechanism(s) by which tumor cell susceptibility to immunological defense systems can be enhanced through the control of specific gene expression. More specifically, he is studying human and murine cell-mediated immunity, with emphasis on natural killer (NK) cell- and T cell-specific regulation of Interferon- gene expression. Howard has also been involved in collaborative projects with the U.S. Army Medical Research Institute for Infectious Disease, which led to important findings on the mechanisms involved in the host response to Ebola virus infection and anthrax toxin.

Howard, daughter Lauren and wife Helga

*(**Howard Young**, cont. from page 3)*

Dr. Howard Young received a B.S. (magna cum laude) in Microbiology from the University of Massachusetts in 1969. At the University of Massachusetts, he was elected into the academic honor societies Phi Eta Sigma, Phi Kappa Phi and Phi Beta Kappa. He did undergraduate research in the laboratory of Dr. Charles D. Cox where he studied the growth characteristics of *Leptospira sp*. He entered the doctoral program in Microbiology at the University of Washington in 1969 and received an NIH predoctoral fellowship for his studies. He obtained his Ph.D. from the Department of Microbiology, University of Washington in 1974. During his thesis work under Dr. Helen R. Whiteley, he characterized and purified the RNA polymerases from the dimorphic fungus, *Mucor rouxii* and demonstrated changes in enzyme levels during the switch from yeast-like to filamentous morphology. Following completion of his thesis, he was awarded an American Cancer Society postdoctoral fellowship to study at the National Cancer Institute with Dr. Edward Scolnick. During his postdoctoral fellowship, he demonstrated that the rapid induction of mouse mammary tumor virus RNA by glucocorticoids occurred through specific receptors. In addition, he was a co-author on the manuscripts which reported the cloning of the H-ras and K-ras oncogenes and he demonstrated that two independently derived transforming viruses, Harvey sarcoma virus and the Rasheed rat sarcoma virus, contained the same transforming gene. After his postdoctoral fellowship, he spent two years at the Frederick Cancer Research Center as a Senior Scientist where he continued his studies on the rat sarcoma virus. He then spent two years as Head of Technical Services, Bethesda Research Laboratories. He joined the Biological Response Modifiers Program, National Cancer Institute in 1983 as a Cancer Expert in the Laboratory of Molecular Immunoregulation and in 1989 became Head, Cellular and Molecular Immunology Section, Laboratory of Experimental Immunology.

How did you get involved in the "public service" aspect of your career?

Both my scientific "parents" were activists. As an undergrad at the University of Massachusetts in Amherst, I worked in the Laboratory of Dr. C.D. Cox. Dr. Cox was the first Chair of the American Society for Microbiology Public Affairs Committee. As my scientific "father" he gave me a lot of freedom in the lab and really encouraged and mentored me as I worked for one of his grad students, Dr. Richard Henneberry . For my graduate work, I was in the laboratory of Dr. Helen Whiteley. Dr. Whiteley was President of the American Society for Microbiology and a long term Chair of the ASM Publications Committee. As my scientific "mother" she taught me that if you keep your standards high, people will always find a place for you, a philosophy that has been true throughout my career. Both these mentors taught me that it was important to give back some of your time for the overall good of the scientific community.

Why do you think it is important to encourage aspiring young scientists?

What greater job can you have than having the freedom to perform scientific research? Everyone in the field that I know loves their work and doesn't consider it a job. In Vienna, Ganes Sen and I were talking about how lucky we were to be doing what we are doing. I've always felt that just one person thinking about things in a different way can result in a new treatment for disease. That just happened in my lab as one of our findings championed by Dr. Deborah Hodge, the staff scientist in my lab, has led to an experimental treatment for a rare leukemia. Thus the more young people we encourage to pursue science, the better off society will be in the long term.

What is the most rewarding aspect of helping out the younger generation?

I think that knowing that some of these students will become future scientists and make even more exciting discoveries that will improve global health. Encouraging students also gives me a sense of returning something to the community as thanks for the support provided by their tax dollars. It's very rewarding to see people who have been in my lab lead successful strong research teams.

*(**Howard Young**, cont. from page 4)*

If a scientist wanted to get more involved in public service, where should he/she start?

Don't wait to be asked to do something. Volunteer and get involved. If you have an idea that will benefit the community, take the initiative and get it going. Every idea needs a champion to make it happen. Be that champion, no matter how small or large the undertaking. To give two examples, 14 years ago I suggested to Sid Pestka that the ISICR would benefit from having a newsletter and he challenged me to create one. What you now see is a result of that initial interaction. Also, about 8 years ago, a summer student asked me to find a way to get the summer students to interact and that discussion led to the establishment of the Summer Student Seminar series. I would also recommend that Fellows and students get involved with a professional society (hopefully the ISICR) as it gives one the opportunity to network and become a part of the larger community.

Do you have any specific advice for Fellows/Students/new PIs?

Yes, you have to be able to multitask and network effectively. Take your work, but not yourself, seriously. Remember it is OK to have fun at what you are doing. Try to go to a small meeting, such as the ISICR meeting, so you can get to know the people in the field. When you go to meeting that includes meals in a dining room, try to sit with people you don't know. Go to seminars that are not necessarily directly connected to your area of research so you can see how others approach scientific problems. Think about the seminars you go to and ask the speakers questions. When you give a talk, stay within your time limits and keep your slides simple. The audience will certainly appreciate it. When you chair a session, remember that if no one asks the speaker a question, it is your responsibility to ask them at least one question. Finally, always have chocolate available as it tends to make people happy.

How do you fit your extracurricular activities in with your standard lab head responsibilities?

I have no life. Seriously, I try to maximize my time by not procrastinating. If I have something to do, I try to do it quickly and I find by taking that philosophy, it gives me the additional time I need. In addition, I have a rather small lab (two postdoctoral fellows, two technicians, one staff scientist, one postbac (a recent college grad) and two high school students. The fellows and staff scientist supervise the students and postbac so I don't have a large group to directly supervise. I do miss being at the bench as I was pretty active in the lab up until about 3 years ago. Recently however, I personally managed to make a simple expression vector construct that has resulted in a potentially novel physiology when transgenic mice containing the vector were analyzed.

During your career, are there specific experiments that you remember?

For reasons I can't entirely explain, there are certain results that seem to stick in my memory bank. They didn't necessarily represent important scientific findings but for some reason I still remember them. As an undergrad, I was working on characterizing the synthetic growth medium for Leptospira and I remember coming into the lab and saw that the cultures that got Vitamin B12 were much denser than the other cultures. While not a Nature paper, it somehow stands out as one of the clearest results I generated while in the lab at UMass. As a grad student, I had been struggling for months to get RNA polymerase activity from my fungal extracts and I remember the day when I was standing in front of the scintillation counter and saw a few hundred counts above background. That result gave me some confidence that I actually had a thesis project. One of the faculty members saw me standing at the counter and told me that by the time I left, I would have thousands of counts above background, which was indeed the case. As a postdoc, I wrote a paper about 3 months after I started in the lab and remember preparing activated charcoal so I could perform glucocorticoid receptor assays, an assay the lab had been unable to get working. I also remember the Saturday I was in the lab and Ed Scolnick was there as well and he got the result that the ras protein bound GTP. I wasn't directly involved with that aspect of the project but I was involved with cloning the ras oncogenes. In fact, I think I may have been

*(**Howard Young**, cont. from page 5)*

one of the first to generate antibodies to the ras oncogenes as I personally injected rats with both Harvey and Kirsten sarcoma virus transformed cells and we found that antibodies arose upon tumor rejection (surprisingly in almost all Harvey but few Kirsten animals). When I finally had my own lab, I also remember the clean Southern blot showing that the IFN-γ promoter was methylated in murine TH2 cell lines but not TH1 cell lines as well as the time we got the data that our IFN-γ transgenic mice had no B cells. Given that I sought to express IFN-γ in B cells, I had predicted that the mouse would predominantly make IgG immunoglobulins and thus make me rich as it would be the mouse of choice to generate monoclonal antibodies. Needless to say, I'm not rich. I also remember when we found that NK cells expressed IL-13 in response to IL-18, a totally unanticipated finding that came as a result of my lab utilizing the multiprobe RNAse protection assay. Of course there are many other specific results that I remember but these are a few that come to mind.

We often ask our interviewees to give their overall view on interferons then and now. What is yours?

I still amazed about how much we don't know about the interferons. With respect to IFN-γ, many biological models demonstrate a need for gamma but systemic administration of gamma is not sufficient to achieve the desired biological endpoints. Thus I believe that learning how to target IFN-γ expression to the appropriate sites will lead to a better use of this protein in the clinic. With respect to the Type I interferons, important questions about why different subtypes trigger different cell responses if they all use the same receptor, is still a question that has not been fully answered. When that puzzle is solved, it may provide a basis for the better clinical use of the interferons without the debilitating side effects currently experienced by many individuals administered interferon.

How much longer are you going to do science?

That's a very difficult question to answer. My previous boss (John Ortaldo) retired this past January at age 60 and a number of other NCI investigators have also retired this year. In addition, the NCI lost a scientific giant, Anita Roberts, to stomach cancer this year so a loss like that certainly makes one appreciate every day. I do have a new boss, Giorgio Trinchieri, and am part of a new NCI initiative on Cancer and Inflammation so I expect to continue to work for awhile (health permitting). I anticipate some very exciting progress in our understanding of the development, progression and treatment of cancer to be forthcoming in the next few years and I would very much like to be a part of it. However one does have to honestly evaluate if one is remaining productive and decide if there is a time to give your resources to younger scientists. You also have to have a plan for retirement. Maybe I could do a monthly newsletter……

THE ISICR SLIDE REPOSITORY

Ever see a slide in a talk that you wish you could use for your own presentation? Well now this may be possible through the ISICR Slide Repository. Members can now go in and post slides that they have developed or download slides that others have provided to the membership. **OVER 250 SLIDES ARE NOW AVAILABLE!!!!!!** For this member only feature, you need to have your member number so if you are not sure what that is, please contact the membership office. We urge members to upload general slides that other members can use for lectures, classes, seminars, etc. Slides are not to be changed without permission from the donor and all copyright permissions must be obtained. The repository now has a useful search capability that allows you to find slides on a particular topic. If you have trouble uploading or downloading slides, please contact Howard Young at younghow@mail.nih.gov.

PLEASE CONSIDER CONTRIBUTING YOUR SLIDES. The success of this initiative depends upon you, the membership!!!!

ISICR Awards

The Seymour and Vivian Milstein Award
Eligibility: Individuals who have made exceptional contributions to research related to interferons and cytokines either in a basic or clinical field. The Seymour and Vivian Milstein awards are made possible by a generous gift from the Milstein family. This award represents a pinnacle of scientific achievement in our field and is an important landmark of the society.

Seymour and Vivian Milstein Award Recipients
1988 - Tadatsugu Taniguchi (Japan)
1989 - Michel Aguet (Switzerland)
1990 - Ara G. Hovanessian (France)
Bryan R. G. Williams (Canada)
1992 - Jordan Gutterman (U.S.A.)
Hans Strander (Sweden)
1993 - Ian Kerr (U.K.)
Robert H. Silverman (U.S.A.)
1994 - Charles E. Bugg (U.S.A.)
Yokio Mitsui (Japan)
Tattanahalli L. Nagabhushan (U.S.A.)
1995 - Susan E. Krown (U.S.A.)
R. Michael Roberts (U.S.A.)
1996 - Paula Pitha-Rowe (U.S.A.)
Robert D. Schreiber (U.S.A.)
1997 - James Darnell (U.S.A.)
Ian Kerr (U.K.)
George Stark (U.S.A.)
1998 - Otto Haller (Germany)
1999 - Michael Katze (U.S.A)-
Adi Kimchi (Israel)
2000 - John Kirkwood (U.S.A.)
Moshe Talpaz (U.S.A.)
2001 - Sidney Pestka (U.S.A.)
2002 - David Levy (U.S.A.)
Ganes Sen (U.S.A.)
2003 - John Hiscott (Canada)
Tom Maniatis (U.S.A.)
2004 - Ernest Borden (U.S.A.)
Keiko Ozato (U.S.A.)
2005 - Nancy Reich (U.S.A.)
Menachem Rubinstein/Daniela Novick
(Joint Award) (Israel)
2006 - Takashi Fujita (Japan)
Michael Gale (U.S.A.)

Honorary Membership Eligibility: individuals who have made substantial contributions to the interferon/cytokine field over much of their careers, either in basic, clinical or applied research. Honorary members are the treasures of our Society and provide us with an historical perspective and valued research tradition.

Honorary Members
1984 - Jean Lindenmann (Switzerland)
Yasuiti Nagano (Japan)+
1985 - Piet DeSomer (Belgium)+
1986 - Gertrude Henle (U.S.A.)
Werner Henle (U.S.A.)+
1988 - Karl Fantes (U.K.)
1989 - Yoshimi Kawade (Japan)
1990 - Norman B. Finter (U.K.)
1991 - Charles Chany (France)
1993 - David Tyrrell (U.K.)
Julius Youngner (U.S.A.)
1994 - Kari Cantell (Finland)
Ferdinando Dianzani (Italy)
1995 - Jaqueline DeMaeyer-Guignard (France)
Earle F. Wheelock (U.S.A.)
1996 - Lois Epstein (U.S.A.)
1997 - Gerhard Bodo (Austria)
Ion Gresser (France)
1998 - Samuel Baron (U.S.A.)
Ernest Knight (U.S.A)
1999 - Derek Burke (U.K.)
Edward DeMaeyer (France)+
2000 - Peter Lengyel (U.S.A.)
2001 - Thomas Merigan (U.S.A.)
2002 - Michel Revel (Israel)
2003 - Robert Friedman (U.S.A)
Jan Vilcek (U.S.A.)
2004 - No award given
2005 - Phillip Marcus (U.S.A.)
Kathryn Zoon (U.S.A.)
2006 - Wolfgang K. Joklik (U.S.A.)
Sidney Pestka (U.S.A.)
+ Deceased Honorary Members

*(**ISICR Awards**, cont. from page 7)*

We invite your nominations for eligible candidates for these prestigious symbols of recognition by our society for their outstanding achievements. A brief exposition of the reason for your nomination and other supportive documents (such as CV, if available) should be sent to the ISICR President by February 10. Electronic submission of the documents is encouraged:

Otto Haller, M.D.
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The nominations will be collated, and passed on to the Chair of the Awards Committee in May. This committee will then prepare a short list of candidates and vote for winners of the awards. As specified in the ISICR Constitution, the final vote of the Awards Committee is subject to the approval of the ISICR Board of Directors.

The Seymour and Vivian Milstein Young Investigator Awards Eligibility: ISICR members who are less than 8 years past receiving a Ph.D or M.D degree. Every year, up to five Young Investigator Awards are presented to ISICR members who have made notable contributions to either basic or clinical research within 8 years after receiving their Ph.D or M.D. This award is provided by a generous gift of the Milstein Family. We urge every eligible individual to apply for the awards. We also ask more senior laboratory advisors to encourage their associates to apply. A brief note describing your accomplishments and a letter of recommendation from your advisor, are strongly encouraged. The deadline is the same as that of the Meeting abstract for the 2007 ISICR Meeting. Applications should be posted online at www.isicr.org by May 15, 2007 (date subject to possible change).

2006 Milstein Awardee

Markus J. Hofer, M.D., PhD

Postdoctoral Fellow, School of Molecular and Microbial Biosciences, University of Sydney, Australia.

Academic Background
1994-2001: Medicine, University of Freiburg, Germany.
1997-2001: Ph.D. (Faculty of Medicine, Department of Virology), University of Freiburg, Germany.

Postdoctoral Appointments
2001-2005: Postdoctoral Research Fellow, Department of Neuropathology, University Hospital Freiburg, Germany.
Since 2005: Postdoctoral Research Fellow, School of Molecular and Microbial Biosciences, University of Sydney, Australia.

Research Experience

I studied medicine at the University of Freiburg, Germany and received my PhD in 2001. Under the supervision of Prof. Peter Staeheli I worked on Borna disease virus (BDV) and its possible involvement in human diseases. In 2001 I joined the Department of Neuropathology at the University Hospital Freiburg where I worked as both a clinical neuropathologist and postdoctoral research fellow. During this time my research in the lab of Prof. Axel Pagenstecher focussed on the role of interleukin (IL)-12 and IFN-gamma in CNS inflammatory and infectious diseases. These studies demonstrated IFN-gamma is the key mediator required for the spontaneous disease in mice with CNS-targeted production of IL-12. Furthermore, cerebral IL-12 production rendered otherwise disease resistant mice susceptible to BDV encephalitis. In 2005 I was awarded a postdoctoral fellowship from the Deutsche Forschungsgemeinschaft (DFG), to study in the laboratory of Prof. Iain L. Campbell at the School of Molecular and Microbial Biosciences, University of Sydney, Australia. My current research in the Campbell lab focuses on determining the mechanisms

*(**ISICR Awards**, cont. from page 8)*

IFN signaling and actions in transgenic and viral models of CNS immunoinflammatory disease. In particular, I am studying the effects of disrupted IFN signaling in the course of intracranial lymphocytic choriomeningitis infection in mice that lack individual signaling molecules required for IFN signal transduction. The initial findings from these studies point to fundamental differences in the antiviral host response depending on which arm of the IFN signaling pathway is disrupted. My ongoing studies are determining the molecular basis for these differences.

Why I joined the ISICR

My research interests have focused on the role of cytokines in the pathogenesis of neurological disease and most recently the CNS pathobiology of IFN signaling. These interests are very much aligned with the charter of the ISICR and it was therefore very appropriate that I become a member. Being a member of the ISICR allows me to keep abreast of the latest developments in cytokine and interferon research. In addition, attending the annual meetings gives me an opportunity to present my work and receive the input from leading authorities in this field as well as to establish new scientific contacts with colleagues who share the same fundamental research interests.

2006 Milstein Awardee

Brendan Jenkins

Group Leader, Centre for Functional Genomics and Human Disease, Monash Institute of Medical Research, Melbourne, Australia.

Academic Background
1987-1989: B.Sc., The University of Adelaide, Australia.
1990: B.Sc. (Honours), Department of Biochemistry, The University of Adelaide, Australia.
1995-1998: Ph.D. (Faculty of Medicine), The University of Adelaide, AUSTRALIA. Research performed at the Hanson Institute, Adelaide, Australia.

Postdoctoral Appointments
1998-1999: Postdoctoral Research Fellow at the Fred Hutchinson Cancer Research Center, Seattle,USA.
1999-2005: Postdoctoral Research Fellow, Ludwig Institute for Cancer Research, Melbourne, Australia.

Research Experience
Over the last decade, my research focus has been to utilize both in vitro and in vivo approaches to understand the molecular mechanisms by which various cytokine signal transduction systems influence patho-physiological responses. As a post-doctoral researcher at the Ludwig Institute in Melbourne, the focus of my work was to elucidate the role of specific signaling pathways transduced from the common IL-6 cytokine receptor gp130 in patho-physiological responses *in vivo*. Specifically, this involved the characterization of a gp130 knock-in mutant mouse containing a specific mutation which disrupts the negative feedback mechanism on gp130-dependent signaling. These mice display an extensive array of pathologies including gastric tumour formation, and deregulation of hematopoiesis (splenomegaly, thrombocytosis, lymphadenopathy), inflammatory responses, and bone metabolism. At the molecular level, this mutation leads to enhanced activation of the latent transcription factor STAT3, and recent studies have highlighted how enhanced STAT3 activity contributes to these pathologies, including cross-talk with other growth factor/cytokine (e.g TGF) signaling pathways. Since starting my own research group at the beginning of 2006 at the Monash Institute of Medical Research, Melbourne, I have continued to implement and expand my research initiatives, including the design of new genetic models, to identify how uncontrolled signaling from the IL-6 cytokine family contributes to human disease, with a particular focus on inflammation and cancer.

I joined the ISICR because it provides unique opportunities to interact with other investigators in the cytokine research community, with a view to establishing new collaborations. Indeed, through my attendance at society meetings over the last couple of years, I have forged productive collaborations with numerous researchers, including 2 research groups in Cardiff, UK, on an in vivo model of peritonitis. In addition, I joined Monash Institute of Medical Research (MIMR) as a result of discussions I had at a meeting in Puerto Rico with my current boss who is a Centre Director at MIMR.

(*ISICR Awards*, cont. from page 9)

2006 Milstein Awardee

ALEXANDER NIESSNER, M.D.

Resident in Internal Medicine at the Medical University of Vienna

Academic Background
1992-1998 M.D., Medical University of Vienna, Austria
1995-1996 Exchange program at the University of Valencia, Spain, 1995
2005-2006 Postgraduate Diploma in Epidemiology, London School of Hygiene and Tropical Medicine

Postdoctoral Appointments and Clinical Training
1998-2001 Research Fellow at the Vascular Biology Research Group, Department of Internal Medicine II, Medical University of Vienna
2001-2004 Clinical Training in Internal Medicine, Department of Internal Medicine II, Medical University of Vienna
2004-2006 Research Fellow at the Lowance Center for Human Immunology, Emory University School of Medicine, Atlanta, Georgia, USA

Research Experience
After receiving my medical degree I started to investigate the role of cytokines in cardiovascular disease during my research fellowship at the vascular biology research group of the Department of Internal Medicine II at the Medical University of Vienna. My projects ranged from the influence of pathogen-induced cytokine expression on atherogenesis to the role of genetic variations of chemokines on acute coronary events. While starting my clinical training in Internal Medicine, my research initiatives extended to the clinical field. Thereby we adressed the predictive value of immune cells for acute coronary events. Moreover, we investigated the beneficial effect of life-style changes on circulating cytokines in an interventional study.

Realizing the importance of immune cells as source of regulating cytokines in atherogenesis, I decided to deepen my knowledge of immune mechanisms in atherogenesis. As research fellow at the Lowance Center for Human Immunology, Emory University Medical School, Atlanta my work focused on the regulatory influence of dendritic cells on T cells in the atherosclerotic plaque. We focused on the influence of interferon-α derive from plasmacytoid dendritic cells on cytotoxic functions of T cells. We found interferon-α producing plasmacytoid dendritic cells in the plaque. Stimulation with TLR9 ligands induced the release of interferon-α in the atheroma. Interferon-α enhanced the TRAIL-dependent killing of plaque-residing cells. This may lead to thinning of the atherosclerotic plaque and may increase the risk of plaque rupture which ultimately leads to myocardial infarction.

Joining the ISICR and in particular the attendance at the ISICR meeting in Vienna gave me the unique chance to interact with many investigators and get an update of current innovations in this field. I am looking forward to continue this very important exchange of knowledge at future ISICR meetings.

Think you know HeLa?

Did you know that HeLa cells, one of the most commonly used cell lines in laboratory research, represents the world's first immortalized life, and arguably, the most "valuable" individual ever lived? Here are some facts about HeLa (based on the article "HeLa" Herself, by Terry Sharrer, in *The Scientist*):

1. Henrietta Pleasant Lacks, an African-American Virginia woman, has been outlived by her immortal cell line by 55 years -- and counting.

2. Mary Kubicek, a lab assistant of George Gey at Johns Hopkins Hospital, was the first to successfully grow Lacks' cervical cancer cells.

3. HeLa cells opened the way for Jonas Salk's killed virus polio vaccine production in 1953.

4. In the early 1960s, Kari Cantell and colleagues used HeLa cells to study interferon production and action.

5. A search for "HeLa" and "interferon" revealed 1280 publications in PubMed -- and counting.

(*ISICR Awards*, cont. from page 10)

The Christina Fleischmann Memorial Award to Young Women Investigators Eligibility: The rules for this ISICR award are the same as for the Seymour and Vivian Milstein Young Investigator Award (see above) except for gender and that candidates within 10 years after receiving a PhD or M.D. degree. Every year the Christina Fleischmann Memorial Award is presented to a young woman ISICR member who has made notable contributions to either basic, translational or clinical research. This award is made possible through the generosity of the Fleischmann Foundation and is dedicated to the memory of ISICR member and outstanding interferon research scientist Christina Fleischmann.

2006 Christina Fleischmann Awardee

Karen Mossman, PhD

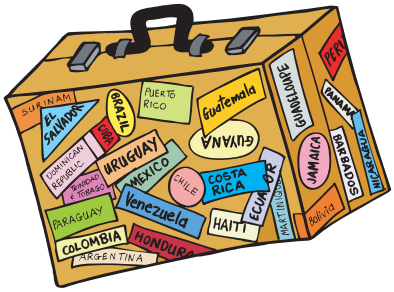
Associate Professor
Department of Pathology and Molecular Medicine
McMaster University

Karen Mossman is an Associate Professor in the Department of Pathology and Molecular Medicine at McMaster University. She is an associate member of the Department of Biochemistry and Biomedical Sciences and a member of the Centers for Gene Therapeutics, Functional Genomics and Antimicrobial Research. Dr. Mossman was trained as a molecular virologist in the laboratory of Dr. Grant McFadden where she studied immune evasion mechanisms by poxviruses, including the characterization of viral interferon gamma receptor homologs. She then completed post-doctoral studies in the laboratory of Dr. James Smiley investigating the innate immune response to herpesviruses. There she discovered that the entry of herpesvirus particles into susceptible cells elicits an antiviral response characterized by the induction of a subset of interferon-stimulated genes in the absence of virus replication or interferon production. She also identified the Herpes simplex virus type I protein ICP0 as being essential to counteract an interferon-induced block to virus transcription. These observations form the basis of the research program currently being carried out in her laboratory at McMaster University.

Dr. Mossman is a member of the ISICR, the American Society for Microbiology and the American Society for Virology. She is a recipient of the ISICR Milstein Young Investigator Award and a Career Award in the Health Sciences sponsored by Rx&D and the Canadian Institutes of Health Research. She currently teaches undergraduate Introductory Virology and graduate Medical Virology courses. Dr. Mossman is a member of the editorial board at The Journal of Virology and is an ad hoc reviewer for numerous journals. In addition, she is on the scientific organizing committee for the International Herpesvirus Workshop and the program planning committee for the American Society of Microbiology.

Seymour and Vivian Milstein Travel Awards

ISICR members who plan to attend the 2007 ISICR meeting in Oxford, UK are eligible for Travel Awards. They are provided through a grant from the Milstein Family as the Seymour and Vivian Milstein Travel Awards, based on the scientific merit of the abstract and financial necessity. However, this award does not exempt payment of the registration fee. Please note that there are no age restrictions to this award. However if both senior and junior members from the same laboratory apply for an award, preference will be given to the junior member. Post your application online at www.isicr.org by May 15, 2007.



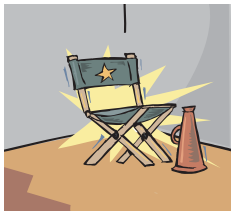
The EXEC DIREC Corner

Review and Renew!

You should all have received your 2007 renewals for ISICR. It's easy, it's not expensive, and it's truly important. ISICR continues to be a leader in recognizing and promoting interferon and cytokine research. The upcoming 2007 meeting in Oxford promises to be extraordinary, kicking off with the fiftieth anniversary of interferon discovery. But we depend on our membership to sustain the society.

Membership in the ISICR has many benefits, including: eligibility for ISICR awards, including travel awards to the annual meeting; the opportunity to participate in the ISICR sponsored session at the American Association of Immunology annual meeting, access to a slide repository currently containing over 250 slides for use in lectures, seminars, courses, etc; the most recent issue of the popular ISICR newsletter and the opportunity to network with the leading investigators in the field of interferon, cytokine and chemokine research. The meetings are outstanding - giving our members a time to see cutting-edge data, present their own work, and socialize with colleagues.

So please, go online and renew. Send your colleagues, students and post-docs to www.isicr.org to join as well - they will thank you.



Debra L. Weinstein, Ph.D.
Executive Director
dweinstein@faseb.org

As always, feel free to contact me with your comments and suggestions

The ISICR is very grateful and honored that the Milstein Family has continued to support our society through the Seymour and Vivian Milstein Awards

NEW ISICR MEMBERS

We welcome these members to the ISICR and we look forward to their participation in the annual meeting and ISICR committees and activities.

Danielle Brabant
Ontario, Canada

Tracy Chew
Ontario, Canada

Daniel H. Cymerman
New York, NY

Nicole A. De Weerd
Clayton, Australia

Hans H. Gad
Arhus, Denmark

Francesca Gugliesi
Turin, Italy

(*New Members*, cont. from page 12)

Diego A. Jaitin
Rehovot, Israel

Susan John
London, UK

Stephen M. Laidlaw
London, UK

Yi-Ling Lin
Taiwan, China

Palash Mandal
Cleveland, OH

Angela F. Messmer
Toledo, OH

Richard Moriggi
Vienna, Austria

Juan F. Navarro
Santa Cruz de Tenerife, Spain

Atsushi Okumura
Philadelphia, PA

Jared Roach
Seattle, WA

Johannes Schmid
Vienna, Austria

Veronika Sexl
Vienna, Austria

Colleen Sheridan
Seattle, WA

Judy Shimoni
Hercules, CA

Michael Skinner
London, UKUK

Michele Uzan
Paris, France

Claudia Zannetti
Turin, Italy

New Member Minibios

Thomas Tan

Michael A. Skinner, PhD
Department of Virology
Imperial College London
Faculty of Medicine, St. Mary's Campus
Norfolk Place, London

Dr Mike Skinner graduated in Microbiology at the University of Leeds in the UK then obtained his PhD in Microbial Genetics & Biochemistry at the University of Leicester in 1982. He studied Coronaviruses with Stuart Siddell in Würzburg, Germany then Poliovirus with Prof. Jeff Almond in Leicester and Reading before moving to the MRC Laboratory of Molecular Biology in Cambridge to work on HIV Tat & Rev. For many years, Mike worked on avian viruses at the Institute for Animal Health, concentrating on avian poxviruses but also working on double-strand RNA viruses and retroviruses. He came to appreciate how far studies on the avian antiviral systems had fallen behind those on the mammalian systems, compromising work on the avian pathogens. Mike was able to obtain funds from the UK's BBSRC to support a collaborative study with Prof Steve Goodbourn (St George's University of London) to address some of the gaps. Mike has recently relocated to Prof. Geoff Smith's Department of Virology on the St Mary's campus of the Imperial College London Faculty of Medicine, where he will continue work on avipoxviruses as mammalian and avian recombinant vaccine vectors and hopefully address issues relevant to clinical virology.

Reasons for joining ISICR "I could see no better way to meet and get to know many of the individuals whose work I had come to know, as well as obtaining a broad, up-to-date view of this important and expanding field"

*(**Mini Bios**, cont. from page 13)*

Gregory A. Peters, Ph.D.

Research Associate
Cleveland Clinic
Cleveland, OH

Dr. Gregory Peters received his Ph.D. in Molecular and Cellular Biology from the University of Cincinnati in 1998. His thesis work was focused on the role of ligand-dependent interactions of the estrogen receptor in uterine cell proliferation. After obtaining his degree, he joined Ganes Sen's laboratory at the Cleveland Clinic as a postdoctoral fellow. He was promoted to Research Associate in 2003. Dr. Peters' has focused his research on PACT, the only known protein activator of the interferon-induced kinase, PKR. PACT is unique because it can activate PKR in the absence of dsRNA. He has identified the regulatory and functional domains of PACT and described a mechanism for PKR activation by PACT or dsRNA. Significantly, the dsRNA-independent activation of PKR by PACT suggests roles of PACT in cellular regulatory pathways in virally-uninfected cells. To investigate the physiological function of PACT, Pact -/- mice were created in the lab. Dr. Peters is analyzing novel and specific developmental defects in the knockout mice, which are not apparent in Pkr -/- mice. The abnormalities in the Pact KO mice include reduced body size, craniofacial defects, severely reduced ear size, and impaired hearing.

Reasons for joining the ISICR: "I joined the ISICR to get to know people working in the field and hear about their research at the annual ISICR meeting. The meetings are a great way to be able to present your own research and at the same time visit another city/country!"

Therapy Possibilities:

These are ways to Keep A Healthy Level Of Insanity.....

1. At lunch time, sit in your parked car with sunglasses on and point a hair dryer at passing cars. see if they slow down.

2. Page yourself over the intercom. don't disguise your voice.

3. Every time someone asks you to do something, ask if they want fries with that.

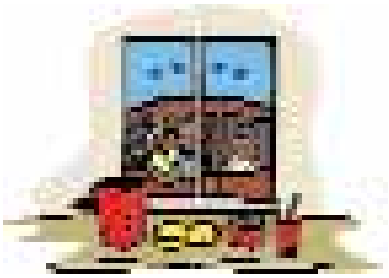
4. Put your garbage can on your desk and label it "IN."

5. Put decaf in the coffee maker for 3 weeks. Once everyone has gotten over their caffeine addictions, switch to espresso.

6. Finish all your sentences with "In Accordance With The Prophecy."

7. dont use any punctuation

8. As often as possible, skip rather than walk.



9. Specify that your drive-through order is "To Go."

10. Sing along at the opera.

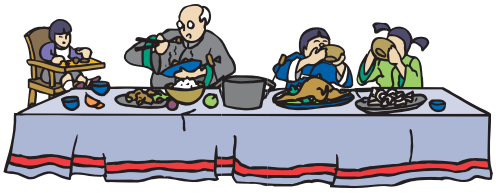
11. Go to a poetry recital and ask why the poems don't rhyme.

12. Put mosquito netting around your work area and play tropical sounds all day.

13. When the money comes out the ATM, scream "I Won! I Won!"

14. When leaving the zoo, start running towards the parking lot, yelling "Run For Your Lives, They're Loose!!!"

15. Tell your children over dinner. "Due to the economy, we are going to have to let one of you go."



PAPP-A BLyPAPP-A BLyS MEA, MaMi KISS-1 MEA, COS EYE001 NOV MY10 ABC1 (or was it ABCD-1, ABCD-2, or ABCD-3?).

How I came to cytokines
(http://www.copewithcytokines.de/)
A personal account by Horst Ibelgaufts

Some people are hunters and gatherers, and, as I discovered, I am one of them, and that has something to do with how I came into cytokines in a rather indirect way (6 more paragraphs before cytokines come in).

It all began with a failure. Many years ago I worked in Ernst-Ludwig Winnacker's lab at the Institute of Biochemistry of Munich University. To cut a long story short: I was interested in the viral etiology of brain tumors, had already done some postdoctoral work on this, and pursued this project in Winnacker's lab. I led the life of what I considered a typical scientist's life: to the lab at 6 am, back home an hour before midnight - and was quite happy with this.

And was I excited when I got the first Southern blot signals from some human brain tumors - and was I down to the bottom when it became gradually clear that the result of these studies could be summarized in a non-publishable contribution with the title "Plasmid sequences in human brain tumors". How I cursed the unknown lab mate who must have used a contaminated pipette when pipetting unaliquoted restriction enzymes.

Actually, I was so down that after some time I quit the bench and concentrated on what I had discovered I also liked a lot: teaching - despite teasing comments such as "those who can, do. Those who can't, teach". When Winnacker asked me if I wanted to do a revised English translation of his highly successful textbook of genetic engineering (in German), I said yes.

The English version of the book came out. My 'favorite' nightmare of the post-publication weeks had not materialized; namely that I opened the latest issue of Nature to find the book review beginning thus: "Had the translator been a bit knowledgeable about genetic engineering and had he had a better command of English, this could have been a fine book....." (thank goodness I usually woke up at that point). After all, it was not so common then to have a non-native speaker translate a highly technical book into English. The translation finished, I began work on a Dictionary of Engineering, having convinced the publishers that a textbook was fine but a dictionary did not exist and dictionaries were different from textbooks. At that point I still thought that the 2000 or more technical terms I had gathered during the translation work could easily be converted into a dictionary. Well, it took me nearly 4 years, spending many hours on it each day. What I had in mind was something better than what I had found in a pocket dictionary of genetic engineering. I mean, if you look up the term Southern blot, and get a definition like 'technique by which nucleic acids are transferred from resolving gels to suitable support membranes for further analysis', you are not much wiser, are you? You want to know more: what is it? How does it work (without getting into cookbook details)? What kind of data do you get? How do you interpret them? Are there alternatives? What kind of data do you not get? etc, etc. I believe the dictionary was really successful and served an entire generation of students - which still pleases me. But, as I said, you don't write entries like that in 30 minutes.

*(**Horst Ibelgaufts**, cont. from page 16)*

And, finally, here come the cytokines. A short while after the publication of the Dictionary of Genetic Engineering I was approached by the owner of a small publishing house in Munich who asked me if I wanted to "do a dictionary of cytokines." He was of the opinion that a biologist who could compile nearly 500 pages of a genetic engineering dictionary, was a dictionary-maker and certainly could also compile something about cytokines. I admit that I was quite skeptical. For once, I had never heard of cytokines when first confronted with the topic - short of not knowing how to spell the word. Also, there was a deadline - I year. Again, to cut a long story short: I did it. The publisher provided me with an initial package of articles of all sorts of kinds about strange things like colony-stimulating factors, interleukins, buffy coat interferons, and lots of other things I did not know about. A product manager of Hoffmann-La-Roche provided me with tons of literature. So I was into the gathering and hunting business again, this time dealing with things I mostly did not know anything about. One year I had, one year it took, and the book came out in German and had 260 pages and was sold out almost immediately.

It may sound foolhardy and presumptuous to attempt to compile a dictionary with knowledge about the subject not worth mentioning. However, I think differently about it and never forgot a remark of my former head of department, Winnacker: "I know practically nothing about this. I think I shall give a couple of lectures about the topic". Right he was. I approached the subject if not with knowledge, then with an open mind to all sorts of things I did not know, terms and concepts I encountered that I had never heard of and that in the projected dictionary should be made "look-uppable'. I started as a complete and innocent newcomer and I have, therefore, tried to include everything that I felt newcomers to the field might want to look up - oh well, just things that once I became interested in, I wanted or needed to know about myself. I still stick to this strategy. Immediately after the German edition of the small dictionary of cytokines had come out, I decided that it was something that should be also published in English. This took me another couple of years but I enjoyed doing it. With my dictionary work I have become a great believer in organizing knowledge in dictionary format (nowadays some would call this an important branch of bioinformatics). Is it not that this is how we frequently approach knowledge? Even when we consult a textbook: the most frequent approach is to look up the dictionary at the end of the book. It is the index, which also is a form of a dictionary only that it does not give us the information we want but at least tells us on which page to find it (and you curse the people who make these indexes if you find 10 or 20 page allocations for a term. More often than not you may go to these pages and still not know what the term you looked up means.)

I have survived the abundance of phenomena and conditions, suitable or unsuitable systems, differences, subtleties, and redundancies you find with cytokines: all sorts of cells appear to produce and secrete, upon all sorts of stimuli, all sorts of molecules into the growth medium, which then induce or suppress all sorts of reactions in all sorts of other cells, either by themselves or in combination with each other.

I grin when I hear the most frequently cited metaphor in research on cytokines, namely that it is a finely meshed cytokine network. This is, of course, true to the extreme. But it is more like connecting everything with everything in a diagram of 100 cell types and 500 factors - and adding some extra lines. My private metaphor is that of a zoo of factors in a jungle of interactions surrounded by deep morasses of acronyms and bleak deserts of synonyms.

I still remember a semantic masterpiece I encountered when I began to compile information about cytokines. Then, it completely boggled me. It just leaves a feeling of stoic equanimity when I read it now. This semantic beauty goes like this: "In contrast to BCDF-gamma and BCDF-epsilon activities of BSF-1, BCGF-2 could function as BCDF-alpha." This comes from a publication more than 2 decades ago.

Nowadays we have other innocent (innocent?) sentences: by immunoprecipitation, we detected specific binding of CARD6 to CARD4, CARDIAK, NAC and TUCAN, CARD containing proteins implicated

*(**Horst Ibelgaufts**, cont. from page 17)*

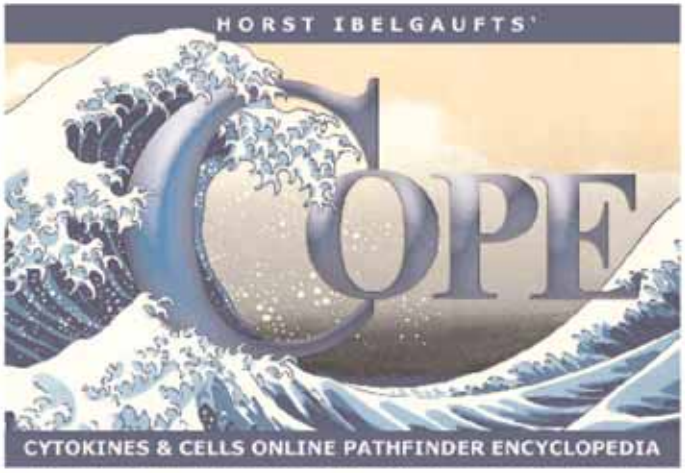
in NF-kappa-B and Caspase-1 activation, but not to other CARD family proteins." Clear as mud, right, if you are not exactly working with these things. So there is still need to make these "look-uppable".

And where am I now? I am still at it, trying to map out my ways through the jungles, morasses, and deserts of cytokine-land and the topic has become more diversified. Only the medium has changed. It is not in the form of books anymore. There are several reasons for this. Put simply: I cannot see any point in doing all the work only to find out that a bookseller gets three times more in royalties than the author. How can I support such a system? (there is more to it, but I need not get into that). Also, as many before me have found out: writing textbooks, or dictionaries is counterproductive. I'll never forget the German professorial demi-god who, looking at my CV, told me with raised eyebrows that I had ceased publishing some time ago. He brushed away the two encyclopedias and the co-authorship of a legal commentary of the German genetic engineering law with the words: "But those are only books!" (it did not prevent him to ask me, through his secretary, for some updated information from unreleased dictionary entries because he had to "prepare himself with background information for an oral Ph.D. examination"). Thank Goodness, at my age I am beyond the need to "make a career".

I come to a close now. Yes, books are out for me. I am into electronic hypertexts now. To me hypertexts are the logical way of handling information; especially, when there are many cross-connections between individual knowledge nodes.

Some years ago I started to put the contents of the Dictionary of Cytokines onto the Internet. We have developed a computer program that takes ordinary text (written in a word processor), creates the web pages, and hypertexts them. On my aged Macintosh G4 the whole process takes about 10 minutes to create a complete Internet version of the cytokine encyclopedia. I began with something like 4000 entries in the printed book. Now, the electronic work (COPE - Cytokines Online Pathfinder Encyclopedia) has grown to 17,700 entries/pages. The work is available at www.copewithcytokines.de.

God willing, and with a little support, I shall continue my life as a hunter and gatherer. I am fascinated by CytokineSpeak: what cells have to say to each other, how they do it, how we can eploit this little bit of knowledge for our own benefit, and, of course, how pathogens exploit this communication biology for information warfare. Others may collect stamps. I collect anything that has to do with cytokines. Some people tell me that the work is useful. So much the better.



Version 18 of COPE is almost complete. The new version includes these subdictionaries (so COPE is much more than just a mass grave of factors)

MiniCOPE Dictionaries
COPE contains the following specialized fully integrated subdictionaries (which I call MiniCOPE dictionaries and which can be seen as stand-along dictionaries, but they are completely integrated into COPE, meaning, links lead to other entries of COPE that are not in the subdictionary, and all COPE entries can lead back to a subdictionary (or one of its entries).

Angiogenesis MiniCOPE Dictionary [~ 340 entries]
Apoptosis MiniCOPE Dictionary [~ 1350 entries]
CD antigens MiniCOPE dictionary (~1805 entries)
Cell lines in Cytokine Research [~ 270 entries]
Chemokines [~ 355 entries]
Cytokine Inter-species Reactivities [~ 360 entries]
Cytokine Concentrations in Biological Fluids [~ 355 entries]

*(**Horst Ibelgaufts**, cont. from page 18)*

Dual identity proteins MiniCOPE Dictionary [~ 70 entries]
Eukaryotic cell types [~1075 entries]
Hematology MiniCOPE Dictionary [~ 520 entries]
Hormones (~ 560 entries)
Innate immunity defense peptides MiniCOPE dictionary (~ 125 entries)
Metalloproteinase MiniCOPE Dictionary [~ 290 entries]
Modulins [~ 90 entries]
NoName Cytokines for those potentially interesting factors without a proper name
Protein domains/sequence motifs MiniCOPE Dictionary [~ 205 entries]
regulatory peptide factors [~ 60 entries]
Uncharacterized factors [~ 290 entries]

Thanks a lot

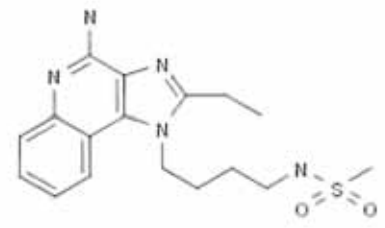
Horst

Any ISICR members interested in assisting Horst in his efforts, either with information or sources of financial support, should contact him at:
Horst Ibelgaufts
[ibeljaro@yahoo.com]

Biotech News

Clips from the *Daily Drug News*
Hannah Nguyen

[September 26, 2006] 3M Pharmaceuticals reveals new TLR7 receptor agonist.



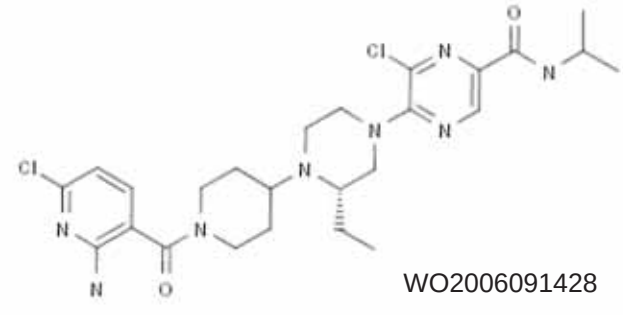
The stimulation of innate and cell-mediated immune responses through Toll-like receptor (TLR)-mediated induction of cytokines may be adequate to develop treatments against inflammatory and autoimmune diseases or cancer. Researchers at 3M Pharmaceuticals have reported the development of new imidazoquinoline analogues of imiquimod, the first TLR7 agonist immune response modifier. Among these novel compounds, **3M-852A** (S-32865) demonstrated high selectivity for the TLR7 receptor and antiproliferative activity in melanoma cells in vitro. Results from a phase I clinical trial revealed that 3M-852A could be administered at doses up to 1.20 mg/m2, 3 times a week for 2 weeks with biological activity (Kshirsagar, T.A. et al. 232nd ACS Natl Meet (Sept 10-14, San Francisco) 2006, MEDI-573). A nonrandomized, open-label, phase II clinical study in patients with inoperable metastatic cutaneous melanoma has been initiated (ClinicalTrials.gov Identifier NCT00189332).

[September 19, 2006] Novel agents claimed for use in arthritis and other inflammatory disorders.

Scientists at Schering-Plough and Pharmacopeia have disclosed the mutual development of a series of heteroaryl-substituted pyrazinyl-piperazine-piperidines that act as **chemokine CXCR3 receptor antagonists**. Such compounds are described as being particularly useful for treating inflammatory conditions, for instance psoriasis and inflammatory bowel disease, autoimmune diseases such as rheumatoid

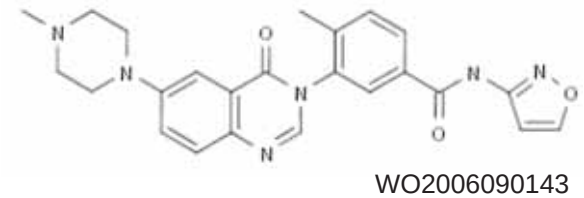
*(**Biotech News**, cont. from page 19)*

arthritis and multiple sclerosis, type 1 diabetes, viral meningitis, leprosy, transplant rejection and cancer (WO 2006091428).



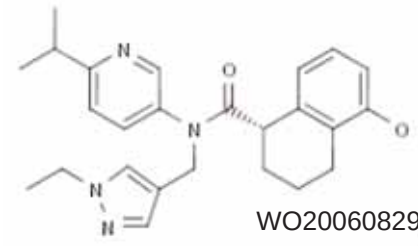
WO2006091428

AstraZeneca, meanwhile, has patented a series of 4-oxoquinazolin-3-ylbenzamide derivatives that act as cytokine (notably TNF-alpha and IL-1) production inhibitors and, as such, are expected to be useful for treating rheumatoid arthritis, asthma, chronic obstructive pulmonary disease, inflammatory bowel disease, multiple sclerosis, AIDS, septic shock, congestive heart failure and psoriasis (WO 2006090143).



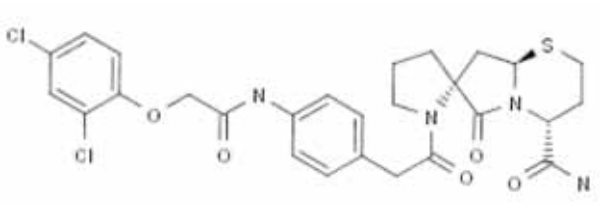
WO2006090143

In a separate development, Mitsubishi Pharma has divulged a novel series of optically active tetrahydronaphthalene derivatives that act as C5a receptor antagonists and, as such, are predicted to be useful for treating disorders associated with the anomalous activity of C5a, notably rheumatoid arthritis (WO 2006082975).



WO2006082975

Finally, researchers at Sigma-Tau have reported the development of a novel series of compounds that act as Myd88 homodimerization inhibitors. These compounds, an example of which is designated ST-2825, are reported to have possible clinical utility in the therapeutic intervention of disorders caused by dysregulation of the TLR/IL-R1 receptor signaling system. Targeted conditions include inflammatory and autoimmune diseases, cardiovascular and atherogenic diseases, sepsis, transplant rejection, cancer and viral infections (WO 2006067091).



ST-2825

[September 06, 2006] SOCS highlighted at a recent meeting as future drug design targets.

Cytokines, a group of signaling molecules similar to hormones and neurotransmitters in function, are critical in the regulation of both innate and adaptive immune responses and play an important role in a variety of immunological, inflammatory and infectious diseases. Pathways engaged in cytokine signaling have been extensively investigated, providing understanding to the cellular coordination of the immune response. Cells, however, have also developed mechanisms to downregulate and/or prevent excessive response to cytokines. The suppressors of cytokine signaling (SOCS) represent a family of cytoplasmic proteins that participate in the negative feedback loop to hinder signaling from the hematopoietin class of cytokine receptors as well as target signal transducers for proteosomal destruction. To date, eight members of the SOCS family have been discovered, with data suggesting they act via the Jak/Stat pathway, and an increasing amount of evidence indicates that disruption of SOCS expression leads to immune and inflammatory disease, underscoring their potential as novel targets for therapeutic management of inflammatory disorders (Hilton, D. et al. Eur Cytokine Netw [6th Int Cytokine Conf (Aug 27-31, Vienna) 2006] 2006, 17(Suppl.): Abst PL1-1).

*(**Biotech News**, cont. from page 20)*

Toll-like receptor (TLR) activation must be tightly controlled to avoid the pathological consequences of immune response. Australian scientists have demonstrated that SOCS1 negatively controls signaling through TLR2 and TLR4 by mediating degradation of an adaptor protein Mal. SOCS1 acts as an E3 ligase, leading to polyubiquitination of Mal and its subsequent degradation by 26S proteasome (Mansell, A. et al. Eur Cytokine Netw [6th Int Cytokine Conf (Aug 27-31, Vienna) 2006] 2006, 17(Suppl.): Abst 01-03/O).

Coexpression of SOCS1 and TRIM8/GERP, a RING finger protein, was shown to decrease SOCS1 stability. A study from the University of L'Aquila, the University of Chieti, Columbia University, the University of Medicine and Dentistry of New Jersey and Bioprogress Biotech SpA demonstrated that TRIM8 is capable of forming a complex with either SOCS1 or Pim-2, and that coexpression of TRIM8/SOCS1 and Pim-2 drastically reduces the stability of SOCS1, providing additional evidence for TIRM/GERP being a main regulator of SOCS1 function (Flati, V. et al. Eur Cytokine Netw [6th Int Cytokine Conf (Aug 27-31, Vienna) 2006] 2006, 17(Suppl.): Abst 01-29/P).

Previous studies indicate that cytokines can cause antiproliferative actions on early stage melanoma cells, whereas late-stage melanoma cells have been found to be multikinase resistant. Analysis of melanoma cell line 1286, resistant towards antiproliferative effects of IL-6 and oncostatin M, revealed high levels of SOCS3 expression. Furthermore, suppression of SOCS3 led to sensitization of cells to IL-6 and oncostatin M and considerable phosphorylation of Stat1 and Stat3. However, it is important to mention that other malignancies such as breast cancer, lung cancer, mesothelioma, hepatocellular carcinoma and squamous cell carcinoma of the head and neck display methylation and silencing of SOCS3 gene (Komyod, W. et al. Eur Cytokine Netw [6th Int Cytokine Conf (Aug 27-31, Vienna) 2006] 2006, 17(Suppl.): Abst 08-18/P).

French scientists have investigated the mRNA expression of SOCS1, SOCS2, SOCS3 and CIS, the eighth member of the SOCS family, in 89 primary breast carcinomas and their effect on patient survival. They discovered that patients with high SOCS2 expression lived significantly longer, while high expression of SOCS1 correlated with PR status and worse prognosis. Further analysis showed that SOCS2 correlated with ER-positive tumors and was identified as an independent predictor for good prognosis; SOCS3 and CIS had no prognostic value (Haffner, M.C. et al. Eur Cytokine Netw [6th Int Cytokine Conf (Aug 27-31, Vienna) 2006] 2006, 17(Suppl.): Abst 08-32/P).

A study by Japanese researchers showed that SOCS1 is capable of selectively suppressing LPS-induced IL-6 but not TNF-alpha production via modulation of Jak/Stat pathway. In their experiments, LPS directly activated Jak2 and Stat5 and SOCS1 inhibited this activation (Kimura, A. et al. Eur Cytokine Netw [6th Int Cytokine Conf (Aug 27-31, Vienna) 2006] 2006, 17(Suppl.): Abst 09-04/P).

Another Japanese group from Okayama University, Kumamoto University and RIKEN Research Center for Allergy and Immunology reported on the role of SOCS5 in mice with cecal ligation and puncture (CLP)-induced septic peritonitis. Mice that overexpressed SOCS5 (SOCS5-Tg) had a significantly lower bacterial load than their wild-type counterparts as well as exhibited better bacterial killing by phagocytes and higher peritoneal levels of IL-12, IFN-gamma and TNF-alpha. Adoptive transfer of CD4 T cells from SOCS5-Tg mice into wild type animals improved their cytokine levels after CLP and caused an increase in bacterial killing. These findings suggest that SOCS5 is a potential target for treating sepsis (Matsukawa, A. et al. Eur Cytokine Netw [6th Int Cytokine Conf (Aug 27-31, Vienna) 2006] 2006, 17(Suppl.): Abst 09-21/O).

[October 03, 2006] Promising results seen with CytoFab in phase II sepsis study

AstraZeneca's CytoFab(R), an ovine polyclonal anti-tumor necrosis factor (TNF)-alpha antibody fragment for the treatment of sepsis licensed from Protherics, had biological and clinical effects in a randomized, double-blind, multicenter, phase II trial. The study included 81 septic patients with either shock or two organ dysfunctions who received placebo or

*(**Biotech News**, cont. from page 21)*

CytoFab(R) in a 250 U/kg loading dose followed by 9 doses of 50 U/kg every 12 hours. TNF-alpha was undetectable in all CytoFab(R)-treated patients 2 hours after treatment initiation, and while interleukin-6 levels declined in both groups, they were significantly lower in the active treatment group. While the number of shock-free days did not differ between CytoFab(R) and placebo, CytoFab(R) was associated with an increase in mean ventilator-free days (15 vs. 9.8) and ICU-free days (12.6 vs. 7.6) by day 28. At that time, mortality was lower, though not significantly, in the CytoFab(R) group (26 vs. 37%). The incidence of adverse events and laboratory and vital sign abnormalities did not differ between groups (Rice, T.W. et al. Crit Care Med 2006, 34(9): 2271-81). A phase III trial of CytoFab(R) is anticipated in 2007.

Avidia Initiates Clinical Trial of Novel Inhibitor of Interleukin-6 for Crohn's Disease
Wednesday September 20, 10:00 am ET

First Innovative Avimer(TM) Protein Therapeutic to Enter Clinic MOUNTAIN VIEW, Calif., Sept. 20 /PRNewswire/ -- Avidia Inc., a privately held biopharmaceutical company, today announced the initiation of and dosing of the first patient for a Phase I clinical trial of its novel drug candidate C326, an inhibitor of interleukin-6 for the treatment of Crohn's disease. C326 is the first in a new class of therapeutic proteins known as Avimer(TM) proteins.

"This trial marks Avidia's transition from a research-based company to a clinical development organization, less than two years after we started the IL-6 inhibitor program, demonstrating the capability of our Avimer technology to deliver new therapeutic product candidates," said Peter Van Vlasselaer, Ph.D., Avidia's chief executive officer. "We believe that C326 may positively impact patients with autoimmune and inflammatory diseases such as Crohn's disease and rheumatoid arthritis. C326 represents the first of a number of Avimer therapeutic candidates that we hope to have enter the clinic in the next few years."

The placebo-controlled, single and multiple dose-escalation study is evaluating the safety, tolerability, pharmacokinetics and pharmacodynamic profile of C326 versus placebo in adults with Crohn's disease. The trial is being conducted in Australia.

"This is an exciting potential therapeutic for a difficult-to-treat disease," said Pat Walicke, M.D., Ph.D., Vice President of Clinical and Regulatory Affairs. "IL-6 has been shown to mediate the inflammatory response in Crohn's disease and other inflammatory diseases. These conditions have few good treatment alternatives and require very careful monitoring of those therapeutic options to achieve management and control of the disease."

About C326 and Avidia Avimer Proteins

C326 is a novel protein therapeutic, designed to inhibit the function of interleukin-6 (IL-6), a pro-inflammatory cytokine that stimulates an immune response to trauma and has been shown to play a role in multiple disease indications. By inhibiting IL-6, C326 is designed to reduce or prevent symptoms associated with autoimmunity and inflammation. C326, as an Avimer drug candidate, has a unique structure that distinguishes it from antibodies, antibody fragments and other therapeutic proteins. Avimer proteins are much smaller than most therapeutic proteins and antibodies and their specificity and avidity make them particularly attractive as drug candidates.

About Crohn's Disease

Crohn's disease is an inflammatory bowel disease (IBD). It is an ongoing autoimmune disorder that causes inflammation of the digestive tract, most commonly the small or large intestine. Symptoms of Crohn's disease may include diarrhea, frequent bowel movement that may or may not be accompanied by blood and mucous in the stool, gas, bloating, indigestion, pain, cramps and weight loss. As many as 500,000 Americans have Crohn's disease. Treatment may include drugs, nutrition supplements, surgery, or a combination of these options to control inflammation and nutrition, and relieve symptoms. Though treatment can help control the disease by lowering the number of times a person experiences a recurrence, there is no cure.

*(**Biotech News**, cont. from page 22)*

About Avidia

Avidia is a privately held biopharmaceutical company discovering and developing a new class of human therapeutic proteins. Avidia is engineering these Avimer(TM) therapeutics against multiple validated and novel targets to address a wide range of disease areas, including inflammation, oncology and neurology. For more information, visit: <http://www.avidia.comwww.avidia.com.

Acquisition of a Worldwide Exclusive License-Production of Recombinant Human Interferon Beta
Thursday October 26, 7:00 am ET

MONTREAL--(BUSINESS WIRE)--Viropro Inc. (OTC BB: VPRO - News; "Viropro") is pleased to announce the signature of an agreement with the National Research Council- Biotechnology Research Institute (NRC-BRI) for the use of powerful inducible expression systems developed and patented by the NRC-BRI. Viropro has obtained a worldwide exclusive licence for the production of the recombinant human interferon beta (<<rH IFN beta>>). Viropro is also planning to sign new licences with NRC-BRI in the near future for the production of other therapeutic human proteins including cytokines and monoclonal antibodies.

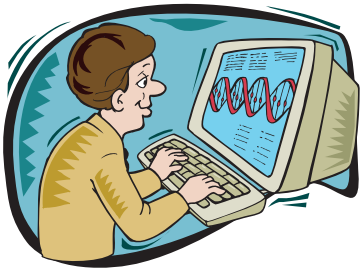
These expression systems are integrated into Chinese Hamster Ovary cells ("CHO cells") which are used by Viropro for its transfer of technology. They are designed to control and maximize the expression of proteins thus allowing high production yields as well as time and cost savings. CHO cells are the international standard for the industrial production of biopharmaceuticals.

"This agreement allows Viropro to reinforce its leading position as an innovative biotechnology company focused on the development of robust industrial bioprocesses and the transfer of its technologies to pharmaceutical companies worldwide", stated Dr. Jean-Marie Dupuy, President of Viropro.

"We are pleased to be signing this agreement with Viropro, a highly dynamic company always in search of innovative and leading edge technologies to better serve its customers", stated Mr. Michel Desrochers, General Manager of NRC-BRI.

About Viropro Inc:

Viropro Inc. (www.viropro.com) mainly conducts operations through its subsidiary Viropro International Inc., whose head office is located in Montreal, Canada. Viropro is a rapidly expanding biopharmaceutical company specializing in the transfer of its technologies for industrial production of biogeneric therapeutic proteins, excluding therapeutic vaccines, for the treatment of various diseases including cancer, diabetes, hepatitis or multiple sclerosis. The company's main objective is to bring about the transfer of technology to pharmaceutical companies in emerging markets with unmet medical needs such as in South America, Asia and Africa. To expand its range of expertise in biopharmaceuticals, Viropro has concluded strategic alliances with various scientific and business partners renowned in national and international spheres. Viropro's business model rests on a strategy aimed at generating recurrent short and long-term revenues, all while maximizing the value of assets and profits of its shareholders. About the National Research Council-Biotechnology Research Institute (NRC-BRI): Recognized globally for research and innovation, Canada's National Research Council (NRC) is a leader in the development of an innovative, knowledge-based economy for Canada through science and technology. The NRC Biotechnology Research Institute (www.nrc-cnrc.gc.ca) is the largest NRC laboratory in Canada dedicated to research and development in life science biotechnology. It employs more than 800 people, including NRC personnel, students, guest researchers and scientists, who work in three main research sectors: health, bioprocess and environment.



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Clinical Trials

Hannah Nguyen

More information on this list can be obtained at http://clinicaltrials.gov [CT], http://www.centerwatch.com/search.asp [CW], or http://clinicalstudies.info.nih.gov [CCNIH].

Sodium Stibogluconate and **Interferon** in Treating Patients With Advanced Solid Tumors, Lymphoma, or Myeloma. Location: Cleveland Clinic Taussig Cancer Center, Cleveland, Ohio, 44195-5044, United States. Study chair: Ernest C. Borden, MD, The Cleveland Clinic, 216-444-8183, bordene@ccf.org. Study ID Numbers: CDR0000449681; CASE-CCF-7509; CASE-CCF-1062

Interferon / Ribavirin for Prevention of HCC Recurrence. Locations: Department of Gastroenterology and Hepatology, Kyoto University Hospital, Kyoto, Japan (Contact and Study Chair: Hiroyuki Marusawa, M.D.,Ph.D., 81-75-751-4319, maru@kuhp.kyoto-u.ac.jp) and Osaka Red Cross Hospital, Osaka, Japan (Contact: Yukio Osaki, M.D.). Study ID Numbers: O2006-415

Microarray Analysis of **Interferon**-Induced Gene Expression in Obese and Non-Obese Patients With Chronic Hepatitis C. Location: VA Palo Alto Health Care System, Palo Alto, California, 94304, United States. Principal Investigator: Ramsey Cheung, MD, VA Palo Alto Health Care System, 650-493-5000 Ext. 66482, rcheung@stanford.edu. Study ID Numbers: CHR0036; PEG215

Phase 2 Study of VX-950, **Peginterferon Alfa-2a Pegasys**® With and Without Ribavirin Copegus® in Hepatitis C. Locations: France and Germany. Study Director: Medical Monitor, Vertex Pharmaceuticals Incorporated. Study ID Numbers: VX05-950-104EU

Rebif® (Interferon-beta) Pregnancy Registry (to collect prospective outcomes data on women in the United States and Canada who have been exposed to Rebif® during their pregnancies. The primary end point will be the rate of spontaneous abortions in exposed pregnancies compared with the rate of spontaneous abortions in patients with MS whose pregnancies were not exposed to any interferon-beta in a manner consistent with the FDA August 2002 Guidance for Industry: Establishing Pregnancy Exposure Registries). Contact: Serono US Medical Information, Rockland, Massachusetts, 02370, United States; 888-275-7376. Study Director and Sponsor: Maria V Lopez-Bresnahan, M.D. MBA. Study ID Numbers: 23888

Study of Recombinant **Interleukin-21** in Combination With Sorafenib for Metastatic Renal Cell Carcinoma. Location: Premiere Oncology of Arizona, Scottsdale, Arizona, 85260, United States, Randy Carlson, RN, 480-860-5000. Contact: Patty Pedersen, (206) 515-4972, pedersep@zgi.com. Principal Investigator: Michael Gordon, MD. Study Director, ZymoGenetics: Diana Hausman, MD. Study ID Numbers: 494F01

Interleukin-1 Receptor Antagonist (IL-1RA) (ANAKINRA) in Severe Systemic-Onset Juvenile Idiopathic Arthritis. Several locations in France. Principal Investigator : Pierre Quartier-dit-Maire, MD, Pediatric Immuno-Hematology and Rheumatology Unit, Necker-Enfants Malades Hospital, 149 rue de Sevre, 75015 Paris, France, 33144494828, quartier@necker.fr. Contact: Benedicte Neven, MD., 33144494823, benedicte.neven@nck.aphp.fr. Study ID Numbers: C05-40

Efficacy of Epidural **Etanercept** in the Treatment of Radicular Low Back Pain (LBP). Location: District of Columbia Walter Reed Army Medical Center, Washington, District of Columbia, 20307, United States; Contacts: Steven P Cohen, MD, 410-955-1818, scohen40@jhmi.edu and Scott Griffith, MD, 202-782-1153, Scott.Griffith@na.amedd.army.mil. Principal Investigator: Steven P Cohen, MD, Johns Hopkins School of Medicine and Walter Reed Army Medical Center. Study ID Numbers: WU#06-20009A

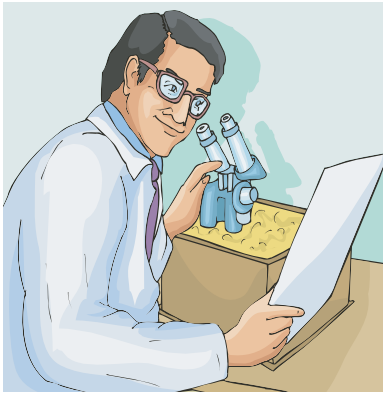
(***Clinical Trials*** continued from page 25)

Mucosal Healing Study: A Phase IIIB Multicentre Open Label 54 Weeks Clinical Trial Evaluating Certolizumab Pegol, a PEGylated Fab Fragment of Humanized Antibody to **Tumor Necrosis Factor Alpha (TNFα)** on Endoscopic and Mucosal Healing in Patients Suffering From Active Crohn's Disease. Several locations in France. Contact: UCB Clinical Trial Call Center, +1 877 822 9493. Study Director: Krassimir Mitchev, MD, UCB Study ID Numbers: C87043; EudraCT Number 2005-003977-25

Phase I, Safety, PK and PD Study of KW-0761 in **CCR4**+ Peripheral T-Cell Lymphoma. Location: Japan. Contacts: Masato Amou, Study Director, Kyowa Hakko Kogyo, 81 3 3282 0999, amou@kyowa.co.jp; and Toshiyuki Amemiya, 81 3 3282 0999, amemiya@kyowa.co.jp. Study ID Numbers: 0761-0501

Safety/Effectiveness of Oral **Chemokine Coreceptor 5 (CCR5)** Antagonist INCB009471 in R5-Tropic HIV Infected Patients. Locations: California, District of Columbia, Florida, Massachusetts and Virginia, United States. Contact: Kim Solomon, Ph.D., 302-498-6781, ksolomon@incyte.com. Study ID Numbers: INCB 9471-201; INCB009471; IND No. 69,030

Stem Cell Mobilization by **G-CSF** Post Myocardial Infarction to Promote Myocyte Repair. Location: University of Ottawa Heart Institute, Ottawa, Ontario, K1Y 4W7, Canada. Contact and Principal Investigator: Chris A Glover, MD, 613-761-4119, cglover@ottawaheart.ca. Study ID Numbers: 135287



JOB OPPORTUNITIES

Professor of Cancer Biology and Associate Professor, Cancer Biology

Monash University, Melbourne, Australia
Monash University is seeking to appoint a professor and associate professor to lead research and teaching in cancer biology in the Monash lnstitute of Medical Research, Faculty of Medicine, Nursing and Health Sciences.

Excellence in research and education and great diversity in location, culture and people distinguish Monash as a leading Australian and proudly international university. With campuses in Australia, Malaysia and South Africa and centres in the UK and Italy, it provides exciting international research and education opportunities. National and international students benefit from extensive curriculum choices offered by Monash's ten faculties in the sciences, professions and humanities.

The Monash lnstitute of Medical Research is one of the leading research institutes in Australia. The institute is in the process of building its cancer research program and a suite of purpose-designed laboratories will be available to the appointees. In the institute, the appointees will lead the further development of cancer biology and, as well, establish links at a translational level with other participants in the Monash Health Research Precinct. This precinct is responsible for the integration of research activities based in the Monash lnstitute of Medical Research, Prince Henry's Institute, the Southern Clinical School and Southern Health, a medical complex responsible for health care delivery in the south-eastern Melbourne region.

The successful candidate for appointment as professor will have: a research doctorate; an international reputation for outstanding research; a record of obtaining external grants for research and in successful supervision of postgraduate research students; proven excellence in teaching; and highly developed skills of leadership, networking and management.

(***Job Oppurtunities*** continued from page 26)

Professorial salary: $A121,459 per annum, plus superannuation. A competitive remuneration package will be negotiable for an outstanding appointee. The person appointed to the associate professor position will be expected to have made substantial progress towards meeting the above criteria.

Associate Professorial salary: $A94,291 - $A103,877 per annum, plus superannuation.
For both appointments, relocation travel and removal allowances and salary packaging are available. Both appointments will be for a period of five years. Subject to performance and other criteria, a further term would be negotiable.

Selection documentation may be accessed electronically on the worldwide web:
http://www.adm.monash.edu/sss/employment/senior

Confidential inquiries regarding the positions may be made to Professor Bryan Williams, Director, Monash lnstitute of Medical Research, telephone +61 3 9594 7166, email bryan.williams@med.monash.edu.au

Applications, clearly stating the position for which application is being made, should reach Ms Bronwen Meredith, Manager, Senior Academic Appointments (Advertised), Monash University, Victoria, 3800, Australia, no later than Friday 12 January, 2007.

Inquiries regarding the application process may be directed to Ms Meredith, telephone +61 3 9905 6193, facsimile +61 3 9905 6016, email bronwen.meredith@adm.monash.edu.au

The university reserves the right to make no appointment or to appoint by invitation.

Monash respects the privacy of your personal information. For more details visit www.privacy.monash.edu.au

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MONASH INSTITUTE OF MEDICAL RESEARCH

MONASH University

WWW

2-D PAGE databases

http://proteomics.cancer.dk/index.html

The 2-D PAGE databases contain data on proteins identified on various reference gel images. You can display protein names and information on specific protein spots by clicking on the image in which you are interested. Also, you can search by protein name, keywords, Mr and pI or organelle or cellular component.

Protein files contain extensive links to other databases or Web sites. The proteomic databases are being constructed for the study of breast and bladder cancer.

The site also features galleries of 2D gels of cells, tissues and fluids, as well as of 2D gel immunoblots and immunohistochemistry pictures.
Recommended by Kevin Ahearn in *Genetic Engineering News*

Alternative Splicing Database Project

http://www.ebi.ac.uk/asd/index.html
The Alternative Splicing Database (ASD) Project aims to understand the mechanism of alternative splicing on a genome-wide scale by creating a database of alternative splice events and the resultant isoform splice patterns of genes from human and other model species.

At the moment three databases are available: AltSplice, AltExtron, and AEdb. AltSplice and AltExtron implement a computational pipeline that detects and characterise alternative intron/exons, alternative splice events, and isoform splice patterns and isoform peptide sequences; value-added annotation includes expression states, human-mouse comparisons, and allele-use at SNP positions. AltExtron considers gene entries from the EMBL database, while AltSplice considers gene entries from EnsEMBL. AEdb is a manually collected & curated (from literature) database - this data is collected by Stefan Stamm (University of Erlangen, Germany). AEdb comes in four forms, namely: AEdb-Sequence (sequence and properties of alternatively splice

exons), AEdb-Function (data on functional aspects of alternative splicing), AEdb-motif (data and sequence of known splice regulatory motifs), and AEdb-minigene (a collection of known minigene constructs for alternative splice events). We integrate the AEdb data with our AltSplice database; we integrate UniProt peptide variants data with AltSplice; integrations of these types add value of evidence to computationally predicted isoform splice events. The ASD database is accessed though powerful interfaces which lets users to query the data for various biological features such as subtractive library expression and evolutionarily conserved events. AltSplice data is available from Geneview and Contigview pages of Ensembl. When citing ASD, AltExtron, or AltSplice, please use:

Stamm S, Riethoven J-JM, Le Texier V, Gopalakrishnan C, Kumanduri V, Tang Y, Barbosa-Morais NL, Thanaraj TA. **ASD: a bioinformatics resource on alternative splicing**. *Nucleic Acids Res 2006 34: D46-D55*.

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Recommend by Kevin Ahern (ahernk@orst.edu) in *Biotechniques*

APOPTOSIS

http://fbspcu01.leeds.ac.uk/users/bmbatrl/atrl_topic.htm

A website designed to introduce students of all ages to the subject of apoptosis.

Recommended by Kevin Ahearn in *Genetic Engineering News*

CBioC: Collaborative Bio Curation

cbioc.eas.asu.edu

The volume of existing biomedical articles is huge and it grows day by day. From 1994 to 2004, close to 3 million biomedical articles were published by US and European researchers alone. Added to the approximately 15 million abstracts already in PubMed, this represents over 800 new articles per day and a myriad of individual new facts to survey for information relevant to a particular research question.

Currently two approaches are pursued to extract and combine facts from biomedical publications. The first approach of hiring human curators is expensive, and thus does not scale-up. It also leads to bias. The second approach of using automated information extraction systems only has a recall and precision of around 60%.

We present here a new approach to the problem through mass collaboration, where the community of researchers that writes and reads the biomedical texts will be able to contribute to the curation process, dictating the pace at which it is done.

Overview of our Approach

Automated text extraction is used as a starting point to bootstrap the database, but then it is up to biologists improve upon the extracted data, "ironing out" inconsistencies by subsequent edits on a massive scale.

The collaboration platform runs as a web browser extension and allows unobtrusive use of the system during the regular course of research, motivating contributions and allowing the natural "checks and balances" system of community consensus to take hold in order to resolve inconsistencies.

Cytokine Database

http://www.cytok.com/database.php

Browse this newly created database which includes all known cytokine genes/proteins discovered to-date.

WWW (continued)

The database is arranged in a hierarchal format based upon gene ontology. It is still in its beta phase, but future developments include user-submitted metadata which will be freely available for any use in database and flatfile format.

Connectivity Map
www.broad.mit.edu/cmap

The Connectivity Map (also known as cmap) is a collection of genome-wide transcriptional expression data from cultured human cells treated with bioactive small molecules and simple pattern-matching algorithms that together enable the discovery of decisive functional connections between drugs, genes and diseases through the transitory feature of common gene expression changes. You can learn more about cmap by following the links below.

read our paper in Science Magazine

an article about cmap at The Broad Institute website

listen to an interview on National Public Radio with Todd Golub about cmap

This web interface is designed to allow biologists, pharmacologists, chemists and clinical scientists to use cmap without the need for any specialist ability in the analysis of gene expression data.

A brief tutorial can be found by clicking 'getting started' under the 'help' tab after log in. Detailed help and a definition of cmap terms can be found by clicking 'topics', also under the 'help' tab. For everything else, please contact us.

The Connectivity Map is based at The Broad Institute of MIT and Harvard in Cambridge, Massachusetts. The cmap team is Justin Lamb, Irene Blat, Josh Modell, Dave Peck, Elizabeth Liu, Emily Crawford, Matt Wrobel and Jim Lerner. Jean-Philippe Brunet, Ken Ross, Michael Reich, Paul Clemons, Steve Haggarty, Bang Wong, Ru Wei and Steve Carr contribute invaluable expertise and assistance. Todd Golub and Eric Lander provide Institutional leadership for the project.

EPD The Eukaryotic Promoter Database Current Release 88
http://www.epd.isb-sib.ch

The Eukaryotic Promoter Database is an annotated non-redundant collection of eukaryotic POL II promoters, for which the transcription start site has been determined experimentally. Access to promoter sequences is provided by pointers to positions in nucleotide sequence entries. The annotation part of an entry includes description of the initiation site mapping data, cross-references to other databases, and bibliographic references. EPD is structured in a way that facilitates dynamic extraction of biologically meaningful promoter subsets for comparative sequence analysis.

GenePaint
http://www.genepaint.org/Frameset.html

GenePaint.org is a digital atlas of gene expression patterns in the mouse. Expression patterns are determined by non-radioactive in situ hybridization on serial tissue sections

To retrieve expression patterns, search by gene name, site of expression, GenBank accession number or sequence homology. For viewing expression patterns, GenePaint.org features a "virtual microscope" tool that enables zooming into images down to cellular resolution

Nuclear Receptor Signaling Atlas
http://www.nursa.org/

To the nuclear receptor signaling community:
On behalf of its members, we would like to extend to you a warm welcome to the Nuclear Receptor Signaling Atlas (NURSA).

One of the most important issues facing our field is the curation, annotation, management and dissemina-

tion of the experimental data that the prodigious pace pace of research in our discipline has generated. The list of cloned and characterized nuclear receptors and coregulators is substantial, representing a tremendous accumulation of information that is yet to be organized into a coherent picture of the biological significance of these molecules. We believe that the quality and pedigree of the investigators in this field, and the efficiency with which they have pursued their research, have not yet been matched by the availability of a resource within which data in all areas of this discipline can be freely accessed, shared and evaluated by the entire community.

In order to sustain the pace of research in the field, we have proposed the implementation of a Nuclear Receptor Signaling Atlas (NURSA), a resource within which bioinformatic and bench research efforts can be pursued in a synergistic and multidisciplinary approach on a common intellectual and technological platform. The primary directive of the NURSA program is to gather and organize information relating to key aspects of orphan nuclear receptor biology, with the aim of extending this blueprint to the wider discipline of nuclear receptor signaling.

Commensurate with this directive, NURSA's goals can be distilled into two broad aims: (i) to execute research strategies designed to rapidly and efficiently elucidate those facets of orphan nuclear receptor biology we deem most critical to its understanding; and (ii) to facilitate the generation of hypotheses, design of experiments and communication of results by scientists active in this field. We anticipate that this initiative will provide a valuable service to the nuclear receptor community by developing a web-accessible bioinformatics resource, in which current and emerging data will be organized into more accessible and "user-mineable" forms.

We encourage you to take some time to browse the site and find out more about the people who make up the Atlas, and to review and critique the informational resources within. To keep up with updates and new content on the site, please sign up for our regular e-mail newsletter.

It is our firm belief that this venture will succeed succeed only with the active participation of the entire complement of researchers who make up the nuclear receptor signaling community, and we hope this will be the case.

Sincerely,
Bert W. O'Malley, M.D.
Baylor College of Medicine
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Ronald M. Evans, Ph.D
Salk Institute
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The On-line Medical Dictionary

http://cancerweb.ncl.ac.uk/omd/index.html

OMD is a searchable dictionary created by Dr Graham Dark and contains terms relating to biochemistry, cell biology, chemistry, medicine, molecular biology, physics, plant biology, radiobiology, science and technology. It includes: acronyms, jargon, theory, conventions, standards, institutions, projects, eponyms, history, in fact anything to do with medicine or science.

It aims to provide a one-stop source of information about all medical and scientific terms and includes many useful cross-references and pointers to related resources elsewhere on the Internet, as well as bibliographical reference to paper publications. It lacks many entries which one can find in paper dictionaries but contains more encyclopedia-like entries and entries on various subjects. It also contains many definitions in related areas.

The dictionary started in early 1997 and has grown, to contain over 46,000 definitions totaling 17.5 megabytes. Entries are cross-referenced to each other and to related resources elsewhere on the net. It is freely available on the Internet via the World-Wide Web.

All searches are logged and a list of frequently requested missing terms is checked. Users are

encouraged to contribute definitions of missing terms. These contributions are usually edited extensively before inclusion. New terms are added almost every day. The dictionary is stored as a single source file in a simplified, easy-to-edit, human-readable form of mark-up which is converted to HTML on the fly by a Perl CGI script originally developed by Denis Howe at Imperial College for the Free On-Line Dictionary of Computing. The script uses Perl's extensive regular expression matching facilities to provide fast, indexed searches of headings as well as full-text searches. Other bits of the Perl script are used off-line to generate the lists of missing terms and the contents pages. It is hoped to develop this further to allow maintenance of the dictionary and associated files through a web form-based interface. Dates after entries indicate when that entry was created, updated or first date-stamped. They do not imply that it was up-to-date at that time.

Recommended by Kevin Ahearn in *Genetic Engineering News*

NUREBASE

http://www.ens-lyon.fr/LBMC/laudet/nurebase/nurebase.html

NUREBASE is a reference database on Nuclear Hormone Receptors. Nuclear hormone receptors are a very important class of ligand-activated transcription factors, found in varying numbers in all animals. The receptors play essential roles in embryonic development, maintenance of differentiated cellular phenotypes, metabolism and cell death. Malfunction or deregulation of the receptors leads to to proliferative, reproductive, and metabolic diseases such as cancer, infertility, obesity and diabetes. Thus, there is a great need to collect and organize existing data about this gene superfamily. Based on our experience of managing the official nomenclature of nuclear receptors, we have developed **NuReBase** to serve as a freely accessible, internet-based database on nuclear hormone receptors.

Datamining is increasingly important in research. The content of data in the GenBank/EMBL/DBJ databanks increases drastically every day and it is more and more difficult to find important and relevant information. In addition, many highly specialized databases on protein domains, expression, mutations, etc. have appeared. This is why we need to group all types of relevant information with clear biological focus in a unique database, which permits to link all the important data. The **NuReBase** database is designed to respond exactly to these needs.

Content

NuReBase is a bioinformatic database of nuclear receptors. **NuReBase Version 4** is hosted on the PBIL server, contains protein and DNA sequences arranged according to the official nomenclature. In addition, for each group of homologous genes a phylogenetic tree and a protein alignment is provided. **NuReBase** also contains EMBL sequences and annotations for proteins and DNA, enriched with nuclear hormone receptor-specific information. The core of the **NuReBase** database is reviewed and this core is complemented by another database, **NuReBase_DAILY**, which is automatically updated every 24 hours. Recently, the **NuReBase** database has been expanded. It now includes data on alternative transcripts for each gene in the database and expression data for human and mouse nuclear receptors.

Recommend by Kevin Ahern (ahernk@orst.edu) in *Biotechniques*

WWW (continued)

Patrocles: The database of polymorphic miRNA-target interactions

www.patrocles.org

Why the name "PATROCLES"?
To a large extent, Patrocles was killed by Hector because he went to battle wearing the armour of his friend Achilles. Likewise, the mutant Texel MSTN mRNA has mistakenly become the target of miRNAs because of its disguise using a target octamer motif borrowed from genuine target genes.
Please send comments and suggestions to: Patrocles@ulg.ac.be

Background information
We have recently identified a G to A substitution in the 3'UTR of the ovine GDF8 (myostatin) gene that creates an illegitimate target site for miR-1 and miR-206. This g+6723G-A SNP causes translational inhibition of mutant transcripts in skeletal muscle which results in a quantitative increase in muscle mass in heterozygous and homozygous mutants (Clop et al., 2006). It can be expected that similar polymorphic miRNA-target interactions occur in other organisms, contributing to phenotypic variation including disease susceptibility in man. This is supported by the recent identification of a SNP that affects the interaction between SLITRK1 and miR-189 that is associated with Tourette's syndrome (Abelson et al., 2005).

To facilitate research along those lines, we are constructing a database that compiles polymorphisms that may affect the interaction between miRNAs and their targets in different organisms: http://www.patrocles.org

In its present version 1.0, Patrocles compiles SNPs in the 3'UTR of human and mouse genes that either create or destroy miRNA target sites. miRNA target sites are defined as octamer motifs that are expected to show perfect Watson-Crick complementarity with the 5' end of mature miRNAs. *Patrocles utilizes two distinct collections of octamer motifs*. The first one comprises 540 octamers exhibiting unusually high "motif conservation scores" in the 3'UTRs of mammalian genes. A large proportion of these octamers are believed to correspond to miRNA target sites, and the cognate miRNA genes are predicted for some of them (Xie et al., 2005). Octamers belonging to this first set are marked by "X" in the Patrocles database.

The second set is composed of the reverse complement sequence of bases 1-8, 2-9 and 3-10 of known miRNA genes. This second set is species-specific. It includes 1246 octamers corresponding to 456 miRNA in human, 973 octamers corresponding to 336 miRNA in the mouse. Known miRNAs correspond to the miRNAs that are compiled in the miRBase database, augmented with the orthologous sequences of known miRNAs when these can be reliable predicted. Octamers belonging to this second set are marked by "M" in the Patrocles database.

SNPs can have different effects on the miRNA target composition of 3'UTRs. Patrocles distinguishes five types of effect:

(i) the destruction of an evolutionary conserved target site (DC)
(ii) the destruction of a non-conserved target site (DNC)
(iii) the creation of a non-conserved target site (CNC)
(iv) a polymorphic non-conserved target site (PNC)
(v) the displacement of a site (D)

Distinguishing the type of effect requires knowledge of:

(i) evolutionary conservation, which was deduced from the human - mouse - rat - dog alignment of the corresponding chromosome region. The latter was obtained from the UCSC genome bioinformatics web site.
(ii) The ancestral allele, which was obtained from analysis of the orthologous champanzee sequence for the human SNPs and from the rat sequence for the mouse SNPs.

When the derived allele included an evolutionary conserved octamer motif, it was assumed that the SNP predated the human-chimpanzee divergence, and that the derived allele (as deduced from the human-chimpanzee alignment) was in fact ancestral. SNPs for which the ancestral allele could not be deduced from the human-chimpanzee or mouse-rat alignement were placed in the DC class if the corresponding motif was evolutionary conserved or in a novel "PNC" class if not.

Some SNP simultaneously destroy and create the same target site which then changes position. This constitutes the last "D" category of effect.

Note that SNPs can simultaneously cause several of these effects on miRNA target site content.

The Patrocles *SNPs that are most likely to affect gene function* are (i) those that destroy conserved target sites, and (ii) those that create a target site in an "anti-target" gene, i.e. in a gene that is expressed in the same tissue as the miRNA and is under evolutionary pressure to avoid such interaction (e.g. Bartel & Chen, 2004).

The latter is in essence what is found in Texel sheep (Clop et al., 2006). We are in the process of compiling information about the level of miRNA-target co-expression to facilitate the identification of polymorphic miRNA-antitarget interactions.

In *further versions of Patrocles*, we plan to (i) expand the database to other species, (ii) compile information about the level of miRNA-target co-expression to facilitate the identification of polymorphic miRNA-antitarget interactions, (iii) include SNPs affecting the coding parts of genes, (iv) include SNPs affecting the miRNA, (iv) develop a tool (Patrocles finder) that predicts the effect of a SNP submitted by the user on interaction with miRNAs.

Gene-Specific Product Directory

http://www.biocompare.com/gene/gene_about.asp

The Gene-Specific Product Directory (GSPD) integrates basic gene/protein information with gene-specific life science products for studying your gene and/or protein of interest. A "gene page" consists of nucleotide and protein sequence information, information about the protein's localization, function, and disease association, and links to products on Biocompare that are specific to the study of that gene or protein (ie, Antibodies, cDNAs, Biomolecules, Immunoassays, siRNAs, etc). You'll be able to compare specifications for these products from multiple vendors at once by using these links.
To search for a specific gene/protein of interest, simply enter the name or symbol for the gene in the search box. If you don't have a specific gene in mind, you may also use the browse tabs at the tops of the page to browse for genes/proteins organized by GO molecular function, GO subcellular localization, or disease association. A complete list of the genes in the GSPD can be seen by clicking on the "Genes" browse tab. The complete list may also be browsed alphabetically by using the links below. You may occasionally find that a gene page has no links to products; in this case there are no products yet listed on Biocompare for that specific gene/protein. Check back often for updates, as new products are constantly being added! Thank you for trying out the beta version of the GSPD. If you notice any problems or have suggestions for improvement, please email info@biocompare.com.

Something to Think About
Why, Why, Why

Why do we press harder on a remote control when we know the batteries are getting weak?

Why do banks charge a fee on "insufficient funds" when they know there is not enough?

Why does someone believe you when you say there are four billion stars, but check when you say the paint is wet?

Why doesn't glue stick to the bottle?

Why do they use sterilized needles for death by lethal injection?

Why doesn't Tarzan have a beard?

Why does Superman stop bullets with his chest, but ducks when you throw a revolver at him?

Whose idea was it to put an "S" in the word "lisp"?

If people evolved from apes, why are there still apes?

Why is it that no matter what color bubble bath you use the bubbles are always white?

Is there ever a day that mattresses are not on sale?

Why do people constantly return to the refrigerator with hopes that something new to eat will have materialized?

Why do people keep running over a string a dozen times with their vacuum cleaner, then reach down, pick it up, examine it, then put it down to give the vacuum one more chance?

Why is it that no plastic bag will open from the end on your first try?

How do those dead bugs get into those enclosed light fixtures?

When we are in the supermarket and someone rams our ankle with a shopping cart then apologizes for doing so, why do we say, "It's all right?" Well, it isn't all right, so why don't we say, "That hurt?"

Why is it that whenever you attempt to catch something that's falling off the table you always manage to knock something else over?

In winter why do we try to keep the house as warm as it was in summer when we complained about the heat?

How come you never hear father-in-law jokes?

And my FAVORITE.....

The statistics on sanity are that one out of every four persons is suffering from some sort of mental illness. Think of your three best friends -- if they're okay, then it's you.

Reports from the 2006 ISICR Annual Meeting

ISICR Board of Directors Meeting
August 27, 2006 - Vienna, Austria

In attendance: Drs. Haller, Fish, Freidman, Young, Hamilton, Dianzani, Williams, Baron, and Pestka.

The President extended the board's gratitude to the Milstein family (and Dr. Pestka) for their continued financial support of the Milstein Award and the Travel Awards (total of $60,000).

The experience with Debbie Weinstein as the new Executive Director was discussed. The Board concluded that Debbie has been very effective and recommended that her role be increased to include further responsibilities in Annual Meeting organization, including management of an ISICR meeting website that could be used every year.

Dr. Hamilton reported that the election a new slate of members of the International Council is complete. The membership of the new International Council beginning in January of 2007 will be available from the ISICR office and posted on the ISICR website.

Dr. Friedman presented the Treasurer's report. With the assistance of the Executive Director, the Account Management Function has been significantly improved. The return on investments has been improved without incurring additional risk. There have been several changes that have reduced expenses and this has resulted in a slight improvement in the ratio of revenue to expense despite some modest reduction in revenue obtained from corporate support. Several strategies to increase corporate contributions were discussed.

The Publications Committee report was presented by Dr. Fleischmann. This year MaryAnn Liebert Inc has agreed to provide $3500 to support the annual meeting. The status of the Journal of Interferon and Cytokine Research was presented. Dr. Fleischmann recommended that the Editorial Board Luncheon be a regular component of the program for the annual meeting and this was approved by the Board. It was recommended that the Board notify the publisher of the JICR (MAL Inc) of the possible merger of the ICS and ISICR. Dr. Haller agreed to write a letter presenting this information.

Dr. Schwarzmeier provided an update on the status of the 2006 joint meeting of the ISICR and the ICS. The meeting registration is expected to exceed 700 attendees. The Board extended its enthusiastic gratitude for the excellent meeting program and organization.

The Meetings committee report was given by Dr. Czarniecki. The 2007 meeting is now scheduled to be held in Oxford, UK from September 16-19. There will be a pre-meeting event that will focus on the history of research in IFNs that reflects the fact that 2007 is the 50th anniversary of their discovery. The Board approved the potential use of up to $20,000 expenses to support meeting planning.

A proposal for the 2008 meeting (possible joint with ICS) to be held in Montreal, Canada has been submitted by Dr. John Hiscott. Dr. Hiscott presented the status of the plan and the Board supported the further development of this proposal. Dr. Czarniecki was advised to coordinate with Dr. Carl Ware who will be the incoming president of the ICS. Planning for meetings beyond 2008 was tabled pending the discussion of the possible merger with the ICS.

Through the FASEB based office of the Executive Director, Dr. Haller conducted a vote of the membership to determine the Society's interest in considering a formal merger with the ICS. 55% of the members voted and approved (by 91%) the proposal to conduct negotiations with the leadership of the ICS regarding such a merger. It was agreed that a Merger Committee should be formed to include members from both Societies. The Merger Committee's charge would be to develop a proposal considering all consequences of the merger. This is likely to include development of a new Constitution and set of By-Laws. This proposal would then be presented to the membership for a vote for formal approval or

(***Meeting Reports*** continued from page 35)

disapproval. The ISICR committee membership will include Drs. Haller, Young, Fish, Zoon, and perhaps another member to be appointed by Dr. Haller.

There being no further business, the meeting was adjourned.

Respectfully submitted
Thomas Hamilton, Ph.D.
Secretary
ISICR

ISICR General Membership Meeting
August 29, 2007

A general membership meeting of the Society was held on Aug. 29 in the Hilton Stadpark, Vienna, Austria. The topics discussed were the same as described in the minutes of the Board of Directors Meeing. Committee reports were also provided and Howard Young update the membership on the newsletter, slide repository and Chinese Research partnership. At the conclusion of the meeting, Paula Pitha-Rowe, Chair of the ISICR Awards Committee, handed out the Travel Award checks.

ISICR Finance Committee Meeting
August 27, 2006

Present at Meeting: Samuel Baron, Chair, Howard Young, Ferdinando Dianzani, Robert Friedman, Sidney Pestka, Otto Haller

Three main issues were discussed at the meeting. The financial status of the ISICR was reviewed using the Treasurer's (Dr. Friedman) estimation of the financial expenditures and income for the first part of this year as drawn up by Debra Weinstein and Dr. Friedman. It was agreed that the Society's balances indicated that the ISICR remained in the safe zone. There are possible anticipated, and perhaps additional, costs for the remainder of the year and these will be reported at the end of the year.

A second issue was raising funds through contributions from donors. It was indicated that the Milstein family would continue to support the Milstein awards and the Milstein travel awards at the present level. Dr. Pestka will remain in contact with the Milstein family. Sponsorships from pharmaceutical companies will be carried out by individual members, perhaps identified by Dr. Haller. Debra Weinstein will help with this process by preparing lists of companies, contacts, and prototype letters.

A third issue was the possible merger of the interferon and cytokine societies. Discussed were the advantages and disadvantages of such a merger. Further discussion was left for the Board meeting. Dr. Friedman pointed out that Debra Weinstein's management was working out excellently and that she could handle additional responsibilities such as helping with the next meeting.

Dr. Friedman, as newly elected treasurer, will chair future meetings of the Finance Committee.

2006 ISICR Meetings Committee Meeting
August 27, 2006 - Hilton Stadpark, Vienna Austria

The meeting was called to order on Sunday, August 27, 2006. Present for all or part of the meeting were the following members and Ad hoc members: Graham Foster, John Hiscott, Yoichiro Iwakura, Nancy Reich, Michael Tovey, Leon Platanias, and Josef Schwarzmeier. Also attending were guests from the ISICR Board of Directors (Otto Haller, Eleanor Fish, Howard Young). The meeting was chaired by Christine Czarniecki.

2005 - Shanghai, China
Xin-yuan Liu, the Chair of the 2005 Meeting was not able to attend. He sent the committee a final status report and Christine Czarniecki reviewed the summary with the committee. The Meetings Committee expresses thanks to Dr. Liu and his colleagues for an extremely successful ISICR Meeting.

The 2005 ISICR conference was held in Shanghai at the Everbright Convention Center in Shanghai, China from 20th through 24th of October, 2005. The conference received much help and support from the Chinese government, companies, and from overseas

(***Meeting Reports*** continued from page 36)

companies, as well as from the ISICR society. The local organizing committee expressed its appreciation and acknowledged the support.

The conference participants were 380 in total and they came from 32 countries and areas. Attending were 104 ISICR members and 98 non members. There were 26 student participants and 152 others. The conference invited one keynote speaker, 39 plenary section speakers, 42 symposium speakers, and 64 workshop speakers. The local organizing committee received 145 oral presentation abstracts and 114 poster presentations abstracts. The local organizing committee selected 6 excellent workshop speakers and 6 poster presentations.

Funds raised for the conference totaled 1,903,000 RMB and included: 350,000 RMB from the Chinese Government; 170,000 RMB fromChinese universities and Institutes; 336,000 RMB from Chinese companies; 202,000 RMB from oversea companies; and 845,000 RMB from registration fees. Expenses (including travel awards and costs of the Satellite Meeting) totaled 1,876,000 RMB, leaving a surplus of 27,000 RMB. The organizers received no seed funds from the ISICR. The 2005 conference organizing committee has used the surplus funds of 27,000 RMB for a publication of the 2005 ISICR Conference Proceedings.

2006 - Vienna, Austria
Josef Schwarzmeier, the Chair of the Organizing Committee of the current Joint ISICR/ICS/ECS Meeting provided a status update.

This meeting is the 6th joint meeting of the two societies (and third joint meeting of the ISICR, ICS and European Cytokine Society). The dates for this meeting are earlier than past ISICR Meetings and were chosen to take advantage of significant financial contributions from the city and state government provided for meetings to be held before Sept. 1 and availability of student housing before Sept. 1 for 80 Euros or less. The timing of this meeting also coincides with Vienna's Celebration of the 250th anniversary of Mozart's birth.

Items reported: orty Speakers were invited and these were a mix of Society members and non-members; the original plan for two concerts during the Congress was changed to one concert and a "Speakers Dinner"; the Organizers expressed their gratitude for ISICR's support during the planning phases of the meeting.

As of the time of this committee meeting, the Organizers report 700 Registrants and the total income for this meeting is reported as 381,000 Euros broken down as follows: 225,000 Euros from Congress fees; 24,000 Euros from Exhibitors and Advertisements; 117,000 Euros from Pharma Companies; 15,000 Euros from the Austrian Government. Funding from Amgen was a great breakthrough. The total expenses were reported as 377,800 Euros which included 52,800 Euros for 'Congress Organization". No seed funding was provided by ISICR. Therefore, the Organizers expect an estimated surplus of 3200 Euros.

The Meetings Committee thanks Josef Schweizmeier and his Organizing Committees for all of their efforts in planning this excellent meeting.

Professor Josef Schwarzmeier

(***Meeting Reports*** continued from page 37)

2007 - Oxford, United Kingdom - The Anniversary Meeting

Graham Foster presented an update on the progress of the 2007 ISICR Meeting which will take place from September 16-19, 2007 in Oxford, England. This meeting, which will take place in Oxford University (http://www.conference oxford.com/Con%20Fac.html), will mark the 50th anniversary of the discovery of interferon by Alick Isaacs and Jean Lindenmann. Therefore, the Organizers are planning a pre-Meeting Symposium entitled "History of the Interferons" on September 15, 2007.

For this Congress, we will have the entire examination school to ourselves. The main lectures and poster sessions will be held in the university examination hall. The main room can hold approximately 400 people. The local organizing committee is comprised of Graham R Foster (chair); Derek Burke; Michael Clemens; Norman Finter; Linda Hibbert; Ian Kerr; Giovanna Lombardi; Tony Meager. Graham reviewed the planning of the program and the ISICR Meetings Committee recommended that poster sessions be announced on the program and that wine and cheese be offered at the sessions. The ISICR Meetings Committee expressed support for the pre-meeting Historical Symposium. The MRC has agreed to contribute £2500 and the Wellcome Trust has indicated that they are also likely to make a contribution to the symposium.

Congress attendees may chose from discounted accommodation in the university colleges or lodgings in the hotels throughout the city. Accommodation costs range from around £60 per night to £120 per night.

The organizing Committee is currently working on a budget. They are planning for approximately 250 registrants; estimated income of £125,000 and estimated costs of £100,000. Their current plan calls for a registration fee of approximately $500 US and the following to be included in the registration fee: lunch, and tea and coffee at breaks but not the Gala dinner. The Meetings Committee strongly recommended that the organizers lower the registration fee and keep it well below $500 US; and discouraged asking the registrants to pay extra for the dinner. The organizers will need seed funds from the ISICR and the Meetings Committee encouraged Graham to work with Otto Haller to obtain the funds.

We discussed information received previously from Debra Weinstein (dweinstein@faseb.org) Executive Director of the ISICR who was previously involved with the organization of a meeting of the Society for Leukocyte Biology in Oxford. She told us of challenges which included audiovisual assistance, establishing systems to deal with banking issues, and negotiating with the lodging facilities to exclude dinner from the lodging fees. The Meetings Committee strongly recommended that Graham and his committee seek assistance from Debbie for the planning of this meeting.

We also discussed fund-raising and the tracking of sources and amounts contributed for each meeting, in a central ISICR database to be kept up to date by Debra Weinstein. Christine Czarniecki agreed to work with Debra to establish such a tracking mechanism.

An unexpected guest appeared at the opening reception in Vienna.

(***Meeting Reports*** continued from page 38)

2008 - Montreal Proposal
John Hiscott presented a proposal for a joint ISICR/ICS meeting in Montreal in 2008. He presented the following as supportive justifications: (i) The last time ISICR held a meeting in Canada was 1992 (Toronto); (ii) there is potential for financial support from large Pharma companies in Canada (Schering, Wyeth, AstraZeneca, Novartis, Merck and others); (iii) there are 3 large Universities that could provide attendees; (iv) accessibility from various international locations; (v) wide variety of hotels in the downtown area.

The possible venues are the Fairmont Queen Elizabeth Hotel centrally located and the Bonaventure Hotel. The Queen Elizabeth Hotel has a Grand Salon that can seat 700 theater style and 23 breakout rooms that can accommodate 23-230. The Bonaventure Hilton Hotel has 23 meeting rooms with seating for 18-140 and exhibition space for 15 booths; and is directly connected to the metro station. A banquet could be held at the Chalet du Mont Royal. The dates would be in September or October. The theme for the meeting would be "Cytokines in Cancer and Infectious Disease" and a tentative local organizing committee has been formed. John is currently working on a budget.

The Meetings Committee expressed strong support for this meeting proposal and voted in favor of recommending Montreal as the meeting site for the 2008 joint ISICR/ICS Congress.

Post meeting note: The ISICR Board subsequently approved Montreal as the site for a meeting in 2008 and John is awaiting approval from ICS.

2009 - New Proposals
The Meetings Committee and the ISICR Board Members in attendance discussed the linkage of review of meetings proposals for beyond 2008 to discussions of the potential merger of the ISICR and ICS. The Meetings Committee was urged to consider all future meetings as joint meetings.

As for future proposals, one proposal for Cardiff, Wales in 2009 was transmitted to the committee from Scott Durum (ICS). The Committee has also received indication of interest from Leon Platanias for a meeting in Chicago and Larry Pfeffer for a meeting in Memphis. The committee members expressed strong interest in hosting a meeting in 2009 in the United States and would prefer the US as opposed to going back to the UK in 2009.

The committee requested that Leon and Larry submit proposals for a 2009 joint meeting using the ISICR Guidelines for Meeting Organizers and we look forward to receiving these proposals for discussion.

Other Business
There was no other business to discuss and the Meeting was adjourned.

Respectfully submitted,
Christine Czarniecki
Chair, ISICR Meetings Committee

2006 ISICR Membership Committee Meeting
August 27, 2006 - Hilton Stadpark, Vienna Austria

ISICR Membership details as of June 2006:

Corporate	6
Emeritus	7
Honorary	24
Life Member	2
PDF	54
Regular	415
Reg. Corp. Sponsored	6
Student	46
Student waived	74
Total	**634**

Recommendations from the ISICR Membership Committee to increase membership:

1. A quarterly review of the literature for IFN/cytokine publications. Recommendation: Senior and first author non-members should receive a form letter from the President inviting them to join the ISICR. Letter should include advantages of membership: access to website, access to slides, access to Newsletter, annual scientific meeting.

(***Meeting Reports*** continued from page 39)

2. Annual NIH Trainee Poster Day. This was considered an opportunity to solicit membership. Recommendation: To provide ISICR flyer, information sheet and Newsletter to an appropriate individual for distribution at the event.

3. For the 50th anniversary of the discovery of IFN - Opportunity: media announcements to coincide with Annual Meeting in Oxford. Recommendation: President of ISICR to approach the UK media.

4. Journal announcement highlighting benefits of membership. Recommendation: target *JICR*, *Cytokine*, *JI*.

5. Jak-Stat Keystone Meeting in Jan 2007. Recommendation: Approach David Levy to make an announcement. Also have flyers and Newsletter as inserts if possible.

Respectfully submitted,
Eleanor Fish
Acting Chair

2006 ISICR Publications Committee Meeting
August 27, 2006
Hilton Stadpark, Vienna, Austria

The Publications Committee meeting was called to order at 11:15 am on Sunday, August 27, 2006. Members present included Bob Fleischmann, Jerry Tilles, Elena Toniato, Deborah Vestal, Ganes Sen (ex officio), and Phil Marcus (ex officio).
Several items of business were discussed.

1. The first item of business was the report of the chair on last year's request to approach Mary Ann Liebert, Inc. about the possibility of their support of a plenary session speaker.

Bob Fleischmann reported that, when approached, Mary Ann Liebert, Inc. had graciously volunteered to provide $3,500/year for the support of a plenary session speaker. The contribution is to be acknowledged in the program of the Annual Meeting and at the time of the plenary session speaker's presentation. Mary Ann Liebert also accepted the offer by the ISICR Newsletter to publish an advertisement for Mary Ann Liebert, Inc. at no cost in each issue.

After discussion, a motion was proposed that the Publications Committee should have a role to play in the selection process, with an eye toward ensuring that the support goes to someone who (1) is a long-time ISICR member and (2) is a steady contributor to the Journal of Interferon and Cytokine Research. The motion carried 5-0.

To implement the policy, it is requested that the local organizing committee should submit a list of potential speakers to the Publications Committee. The Publications Committee will then either choose from the submitted list or make an alternative nomination.

2. Appointments were announced for committee members whose terms expire in December 2006. It was announced that President Otto Haller had reappointed Bob Fleischmann as chair of the Publications Committee and had reappointed Manfred Beilharz, Joan Durbin, and David Levy to the Publications Committee. All members accepted their reappointments.

3. State of the Journal of Interferon and Cytokine Research (JICR) was presented by Ganes Sen.

Difficulties in scheduling the Editorial Board Luncheon were discussed. It was requested that the local organizing committee should schedule a time and place for the Editorial Board Luncheon. Since the JICR is the official journal of the society, the Editorial Board is, in essence, a standing committee of the ISICR. The Publications Committee gave its full support to this request.

The effects of a possible merger of the ISICR and the Cytokine Society on the JICR were discussed. After discussion, a motion was proposed that the chair should write a letter to the President of the ISICR (Otto Haller) asking for clarification of the role of the Publications Committee and offering our help in negotiations through service by a member of the Publications Committee on the Negotiating Committee. The motion carried 5-0.

(***Meeting Reports*** continued from page 40)

The yearly review of the JICR was given by Ganes Sen. Major features of the review were as follows.

a. The number of published manuscripts is stable and the number of pages is increasing.

b. The citation index fell somewhat but continues to be above 2.0.

c. There was some discussion about the need to have more clinical papers published in the JICR.

d. There was some discussion about the need to include more reviews in the JICR, since it is believed that there is some linkage between the publication of high quality reviews and a citation index score.

e. There was some discussion about the need remind Section Editors and reviewers to provide timely review of submitted articles.

f. In accordance with our contract with Mary Ann Liebert, Inc., terms of some Section Editors and some Editorial Board members will expire.

Reappointments and new appointments will be submitted to the Publications Committee for their approval.

4. Plans for the Journal of Interferon and Cytokine Research to celebrate the 50th anniversary of the discovery of interferon were described by Phil Marcus, Senior Consulting Editor.

In recognition that 2007 will be the 50th anniversary of the discovery of interferon, Phil Marcus presented the plan of the JICR to publish a series of reflective reviews from scientists who were early researchers of interferon. It is anticipated that these reviews will be published at a rate of one per issue throughout the 2007.

The meeting adjourned at 12:30 pm.

Respectfully Submitted,
Bob Fleischmann, Chair

ISICR Vice President, Eleanor Fish discusses the proposed ISICR-ICS merger with a well known former Vienna native.

ISICR Standards Committee Meeting
28 August 2006 - Vienna, Austria

Committee members: Ronald Bordens*, Vijay Jethwa*, Tony Meager*(*in attendance), Norman Finter, Masayoshi Kohase, Sidney Grossberg (Chairman), Guido Antonelli, Aida Prync, and Huub Schellekens. Louis Westreich attended the meeting as an observer.

Dr. Meager acted as Chairman and opened the meeting at 18.00 hours, and reviewed the agenda and its attached documents with the Committee. Apologies for absence were received from Sidney Grossberg and Guido Antonelli.

I. Interferon-β Manufacturers Collaborative Neutralizing Antibody Study

The Biotech Working Party (BWP)/Committee on Healthcare and Medicinal Products (CHMP) of the European Medicines Evaluation Agency (EMEA) of the European Union (EU) commissioned a collaborative study in 2004 in which the three major manufacturers of human interferon-β (Biogen-Idec, Berlex (Schering AG), and Ares-Serono) were asked to use the MxA interferon (IFN) bioassay (Pungor, et al., J.I.C.R. 18:1025-1030, 1998) in order to determine

(***Meeting Reports*** continued from page 41)

whether this method might provide a generally acceptable way of measuring IFN neutralizing antibodies. The study was organized by NIBSC. Serum samples from IFN-β treated patients with multiple sclerosis provided by the three manufacturers were received at NIBSC, subdivided and distributed by NIBSC among them in a blinded fashion. Raw data from the MxA IFN bioassays conducted by each maunfacturer were sent to NIBSC for analysis. Information from Tony Meager at NIBSC and Vijay Jethwa at Biogen-Idec indicated that the results of the study have not been completely analyzed, a situation that unfortunately has not progressed since this matter was discussed at the previous meeting in Shanghai in 2005. Regrettably, the three manufacturers have not agreed to release the results and seem unlikely to pursue this method of bioassay further. An additional problem is that in this bioassay the MxA protein induced by IFN treatment is measured by means of an anti-MxA antibody. Novartis has patented the production of anti-MxA monoclonal antibody, and is notwilling to allow others to produce it. EU researchers now propose to evaluate other bioassays. The Committee suggested that the study needed championing to take it forward and that further meetings at the BWP might be needed to resolve matters.

II. WHO/NIBSC developments

Tony Meager (NIBSC) reported that significant developments had taken place at NIBSC that should beneficially affect the production and establishment of biological reference materials. In March 2006, an internal meeting with WHO officers had taken place to discuss the entire current programme of reference material development at NIBSC. This was the first meeting of meetings planned annually in the early months of the year to inform WHO of progress made with each individual reference material and whether reports of collaborative studies for particular reference materials would be submitted to the WHO Expert Committee on Biological Standardization (ECBS) in that year. These meetings should provide a more formal basis for communication and interaction between WHO and NIBSC, and will replace informal arrangements of the past. A new facility at NIBSC, the Centre for Biological Reference Materials (CBRM), for the preparation of reference materials is now fully commissioned and will permit expansion of NIBSC's capacity to produce large fills (≥ 4,000 ampoules), including those of infectious materials. The number of WHO international standards and reference reagents is increasing year by year, which is beneficial to the scientific community. However, low temperature storage space at NIBSC is under pressure and increasingly ampoules of reference materials are being stored at off-site facilities. Issues of quality monitoring at these were raised by Committee members, but Tony Meager gave assurances that temperature was continuously monitored at these facilities and that routine quality inspections/audits were carried out.

III. New Cytokine Standards and Problems

The Committee briefly reviewed the following information that Dr. Tony Meager of the National Institute of Biological Standards and Control (NIBSC) had kindly provided..

VEGF (vascular endothelial growth factor) and **KGF** (keratinocyte growth factor): WHO International Reference Reagents (IRR) for these two growth factors were established by WHO ECBS in October 2005.

IL-17, IL-18: The collaborative studies have been completed and summary reports are to be presented to the WHO ECBS in October 2006; these are likely to be considered only for establishment as IRR, but not as International Standards (IS), inasmuch as less than five participating laboratories were involved in the collaborative assay studies.

TRAIL (tumor necrosis factor-related, apoptosis-inducing ligand): collaborative study data has been accumulating. It is expected that raw data will be analyzed in the next year with the possibility that a summary report will be submitted for consideration by WHO ECBS in October 2007 to establish an IRR of TRAIL.

Reference materials of **Neurotrophin-3** (NT-3), **IL-23, IL-29 (IFN- 1)**, and **BLyS** (B-lymphocyte stimulator) are in various stages of preparation. BLyS

(***Meeting Reports*** continued from page 42)

stimulator) are in various stages of preparation. BLyS remains problematical due to the absence of a suitable bioassay.

Pegylated IFNs. The Committee heard from Ron Bordens that, since pegylated IFNs (e.g., PEG-IFN, Pegasys) were taking over from the non-pegylated IFN-α2 products as the products of choice for therapy of viral and malignant diseases, there was a perceived need to develop and establish reference preparations for these. Such products tended to be manufacturer-specific and could vary in site(s) of pegylation and the size and structure of the attached PEG chains. Nevertheless, the Committee agreed that investigation of the characteristics of pegylated IFN products, especially their bioactivity and receptor binding, should be pursued in collaborative studies. Such studies would contribute valuable information, perhaps generally available as an informative database, on pegylated IFN products, and indicate future directions for the development of appropriate reference materials. Tony Meager indicated that NIBSC might be interested in procuring supplies of pegylated IFNs, preparing ampouled reference preparations, and distributing these among interested parties for collaborative studies. He felt that some external funding would be necessary to enable this work to proceed,but would enquire about possible strategies to implement a pegylated IFN development and standardization program when back at NIBSC.

IV. New United States Repository for Biological Standards

The Committee noted that as of August 2006, all NIH Reference Reagents previously available from the National Institute of Allergy and Infectious Diseases (NIAID) must now be obtained from the NIAID Biodefense and Emerging Infections (BEI) Reagent Resource Repository. Interferons and other cytokine reference reagents and antisera (as well as other materials such as bacteria, viruses, and toxins) are now stored at this repository, which is currently managed by the American Type Culture Collection (ATCC). It is necessary to be registered with the BEI Repository prior to any request for reference reagents. The following website provides the information and forms needed to register: http://www.beiresources.org/registration/register.cfm. The email for general information is: contact@beiresources.org. For questions regarding the availability of reagents, one may call the BEI Repository at: 1-800-359-7370. The NIAID project officer is Dr. Kenneth Cremer, kcremer@niaid.nih.gov. Once obtaining requested materials.

The Committee suggested that it was important to widely disseminate this information. It was suggested that, besides its inclusion herein, it be printed as a separate item in a forthcoming ISICR Newsletter.

V. NIBSC source for standards

Tony Meager commented that there was nothing to add to matters previously considered under item II.

VI. Other discussion items

Vijay Jethwa informed the Committee that a paper on assays to measure neutralizing antibodies to IFNs drafted by a panel of experts and submitted to the Journal of Immunological Methods was now in press.

The Committee agreed that there were presently too few members available to attend the ISICR Standards Committee meetings and that new members should be actively sought.

The meeting closed at 19.00 hours.

Respectfully submitted,
Anthony Meager.

(***Meeting Reports*** continued from page 42)

Financial Report from the ISICR Executive Director

August 23, 2006

Dear Dr. Friedman,

It has been my pleasure to be working with you and ISICR this year. The financial integrity of this society has remained relatively stable thus far in FY06. I will continue to work with you and the ISICR board to explore new ways to maintain and improve the financial health of the society.

- Transferring the account management into Quickbooks for easier bookkeeping and reporting mechanisms
- Opening a business interest maximizer account at Bank of America for the operating revenue (3.26% yield, approx.)
- Transferring the Certificate of Deposit from a 150-day term at 1.74% to a 10 month term at 4.5%

Other things to note in the budget report include:

- The dues line item is significantly lower in 2006 than in 2005, reflecting the lower number of members. This is likely due to a greater number of people renewing or joining in order to attend the annual meeting last year. With significant marketing efforts for the 2007 meeting, the membership numbers will hopefully rise next year, corresponding with meeting registration.
- The corporate sponsorships are lower in 2006 than in 2005. Usually, corporate sponsor contacts are best made by society members. We, in the ISICR business office, will gladly work with the ISICR leadership on efforts to increase corporate sponsorships in the coming year.

Again, thank you for the opportunity to work with ISICR. I look forward to future successes.

Respectively,
Debra L. Weinstein, Ph.D.
Executive Director

International Society for Interferon Research
Balance Sheet

Accrual Basis — **As of August 23, 2006**

	Aug 23, 06	Dec 31, 05
ASSETS		
Current Assets		
Checking/Savings		
11100 - Bank of America	20,486.43	115,022.22
11111 - Business Interest Maximizer	100,903.79	
11112 - Bank of America CD	98,355.42	95,650.47
Total Checking/Savings	219,745.64	210,672.69
Total Current Assets	219,745.64	210,672.69
TOTAL ASSETS	**219,745.64**	**210,672.69**

ISICR BUDGET REPORT

Income	**YTD 06**	**12/31/2005**	**2006**
Estimated			
Corporate Sponsorships	$23,000.00	$48,000.00	
Milstein Sponsorship	$60,000.00	$60,000.00	
Dues	$10,570.00	$16,640.00	
Fleischmann Sponsorship	$ 1,500.00	$ 1,000.00	
Interest Income	$ 935.41	$ 47.37	$ 675.00
TOTAL INCOME	$96,005.41	$125,687.37	$ 675.00
Expenses			
Accounting	$ 775.00	$ 2,500.00	
Administrative Expenses-FASEB	$17,717.85	$26,170.29	$11,335.00
Administrative Expenses	$ 1,372.29	$ 2,470.73	
Awards-Travel	$44,400.00	$33,277.27	
Awards-Milstein & Milstein Young Invest.	$16,250.00	$17,500.00	
Awards-Fleischmann	$ 1,500.00		
Bank Charges	0	$ 181.86	
Consulting Fees	$ 450.00	$ 1,800.00	
Meeting Expenses	$0.00	$0.00	
President's Office Expenses	$0.00	$ 1,234.85	
Secretary's Office-Expenses	$0.00	$ 3,259.54	
Secretary's Office Wages	$0.00	$18,500.00	
Treasurer's Office Expenses	$0.00	$ 5,020.00	
Website Expenses	$ 1,400.00		
Discretionary Fund	$0.00	$ 500.00	
TOTAL EXPENSES	$83,865.13	$111,414.54	$11,335.00
NET REVENUE	$12,140.28	$14,272.83	-$10,660.00

The 2007 ISICR Meeting - Oxford, England

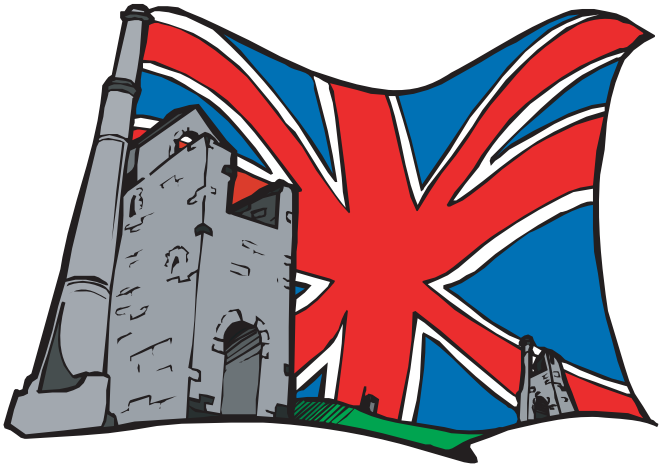
September 15 to 19, 2007

ISICR members will not need to be reminded that 2007 marks the fiftieth anniversary of the discovery of interferon by Isaacs and Lindenmann. To help celebrate the fiftieth birthday of our favourite cytokine the 2007 ISICR meeting will be held in Oxford, England and will run from the 16th to the 19th of September. The main ISICR meeting will be preceded by a special Historical Pre-Meeting on September 15th when some of the interferon pioneers will review the early days of these fascinating cytokines.

The meeting will be held in Oxford, England - an easy to access city of great historical interest - and accommodation to suit all pockets will be available for the entire meeting. The program for the meeting is already taking shape and the organising committee are delighted to report that a host of international experts have already agreed to join us and describe their latest research findings. Full details of the meeting can be accessed via the ISICR web-site and the web-site will be open for bookings in January. An early booking is recommended as we expect unprecedented interest in the meeting and late comers may find that the meeting is over-subscribed.

We look forward to welcoming you to Oxford

Graham Foster
Chairman of the 2007 ISICR Organising Committee



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The future of our society depends upon members maintaining an active membership status. Don't let us down, RENEW TODAY at www.isicr.org.

Access to the latest newsletter and the slide repository will be blocked if memberships are not renewed and you will not be eligible for ISICR awards. Remember 3 year regular memberships are available and Postdoctoral fellows can join/renew for only $10/year.

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