January 2001
Volume 8, No.1

2001 Meeting

October 7-12
Cleveland, OH

www.isicr2001.org

Future ISICR Meetings
Oct. 6-11, 2002 Torino, Italy
Joint ISICR/ICS/SLB
2003 Cairns, Australia

ISICR WWW SITE
www.ISICR.org

ISICR BUSINESS OFFICE
ISICR@faseb.org
TEL: 301-571-8319
FAX: 301-530-7049

ISICR NEWSLETTER EDITORS
Howard Young
youngh@mail.ncifcrf.gov
Fax: 301-846-1673

Pat Fitzgerald-Bocarsly
Bocarsly@umdnj.edu
Fax: 973-972-7293

Hannah Nguyen
nguyenh@cesmtp.ccf.org
Fax : 216-445-9769

ISICR
INTERNATIONAL SOCIETY FOR INTERFERON AND CYTOKINE RESEARCH

A Brief Perspective by **Edward DeMaeyer** in Honor of His Election to Honorary Membership in the ISICR

(Presented at the banquet in Amsterdam Nov. 8, 2000)

Thank you! I am not sure I recognize myself in the glowing description you just gave, but I'll attribute it to your friendship and kindness. I regret very much that I could not attend last year's meeting in Paris, where I was supposed to receive the honorary membership. It is rather ironic that when the ISICR meeting took place in my hometown I was prevented from attending. When I was an adolescent in Belgium a few years ago, there was a very popular Dutch singer by name of Johnny Jordaen; some of the Dutch colleagues present here tonight may remember him. One of his songs went as follows: "Geef mij maar Amsterdam, dat is beter dan Parijs! ", which, for the few of you who don't speak Dutch, means in English "Give me Amsterdam any time, it is much better than Paris!". So tonight I agree with Johnny Jordaen, and I am very happy to be in Amsterdam.

What I didn't tell you was that my scientific career started very early, when I was a six year old, in 1938 to be exact. At that age I was still in kindergarten, which was run by nuns. One Friday, one of them told us "Children, you should never eat meat on Fridays, because if you do, you'll grow a very ugly black tail, just like the devil!". And of course, you already guessed it, the first thing I did when I came home from school was go to the cellar where my mother kept the meat and eat a big chunk. And for the rest of the day, and even the day after, I kept touching my behind hoping to feel the ugly black tail growing on me, so that I could show off to my friends. But to my great disappointment nothing happened, and thus I learned at a very early age never to believe anything just on authority, but find out for myself whenever possible. Also, this first experiment turned out negative in that I did not obtain the result I had hoped for, and thus it was the first of a long series to come.

I must confess that when I decided to become a scientist,

or a virologist to be more precise, I was driven not by pure curiosity but much more by the desire to do something useful. This was in 1954, when I was still a medical student, and when poliomyelitis was the dreadful disease that put people in iron lungs and could paralyze them for the rest of their lives. When it became clear that the vaccine developed by Jonas Salk conferred protection against polio, I became convinced that trying to find ways of preventing disease was at least as good a way of practicing medicine as working in the clinic. I then had the good fortune to meet Pieter De Somer, the newly appointed young professor of microbiology at the medical faculty. Those were the difficult postwar years in Belgium, and De Somer realized that it would never be possible to set up a truly efficient department of microbiology with the official funding then available. He therefore created, in 1945, a pharmaceutical company making penicillin -he certainly was way ahead of his time in that respect and, with money made by the company he built the Rega Institute for basic and applied research in microbiology. I owe him a great deal, since he put me on the path of investigation. Later, when I was a postdoc in Boston with John Enders, I started working on an antiviral factor, first discovered by Monto Ho and called VIF, and when one day Alick Isaacs visited the lab and gave a talk, I realized that more than likely I had been working with interferon. What I learned from Enders was patience, patience, patience: take your time and make sure! There was no rush to publish and we never felt under pressure to come up with results; what a wonderful way to do research! After Enders and Boston, I went to the Rockefeller Institute in New York to work under Peyton Rous, of Rous Sarcoma fame (whereas one worked with Enders, one worked under Peyton Rous). At the time I started in NewYork, Rous was 81 years old, though I probably should say 81 years young, with the energy and intellectual acuteness of someone half his age; an amazing man. Rous received the Nobel prize in 1966 when he was 87 years old, principally for discovering Rous Sarcoma virus in 1911 when he was 31 years old. Not many can afford the luxury of waiting 56 years! Rous told me in no uncertain terms that I should stop working on interferon immediately, since it would become a bandwagon with no future at all! But since I had learned at a very early age not to believe anything on authority, I thought I would find out for myself whether he was right or wrong! And of course, I don't have to tell you how wrong he was! Of course it is true that for many years we were working with protein preparations slightly contaminated with interferon, which is why Jaqueline and myself devoted so much time to devise ways of purification.

And now, to finish, I would like to tell you how it is also possible to get into trouble working on interferon. About ten years ago, we started a research program to investigate the possibility of using interferon-beta for gene therapy of HIV infection. As a part of this, we developed mice transgenic for a continuously expressed interferon beta gene, to find out whether the continuous presence of low amounts of interferon was compatible with “normal” life. It soon turned out that the males of one of the strains obtained were very much more aggressive than normal C3H males, as manifested by fighting, biting and wounding. Since it is known from the clinic that high doses of IFN beta can affect the CNS, we had, of course, to find out what was going on. To make a long story short, we found that the enhanced aggressiveness had nothing to do with the low continuous production of interferon, which was a relief, but was do to the fact that the insertion of the transgene had inactivated the gene on the X chromosome encoding MAOA, an enzyme that plays an important role in the development and function of the CNS. It just so happened that one year before, a Dutch clinical geneticist of Nymegen by name of Han Brunner had

described an X-linked heritable disease, occurring in 50 % of the males of a Dutch family, caused by the inactivation of the MAOA gene as the result of a nonsense mutation. The affected males are characterized by slight mental retardation and abnormal impulsive behavior, including aggressiveness, and occasionally have to be institutionalized. We had thus, serendipitously, obtained an animal model for this disease, and had, among others, landed in the field of neurobiology but also of behavioral genetics, which, as we soon found out, is a minefield. Indeed, to many, behavioral genetics is not a politically correct activity, since, according to them, at birth the mind is a blank slate and genes do not influence behavior, but only society does, and it will be sufficient to change society to make everyone behave correctly. A little over two years ago, as soon as I had retired, my collaborator who was the driving force behind this whole program, was told she could not make any more grant applications, and would have to leave the Curie Institute. I mention this episode because I want to make a plea for something that always been very dear to me, and that is scientific freedom. We should be allowed to go wherever our curiosity and our observations lead us, even if this makes us stray away from a preconceived plan, and even if we end up in a different field, and even if the results do not fit with someone's pet theories. Scientist should not be walled in a previously established program, but should be free to follow interesting and novel leads, wherever they may bring us, be it from interferon to neurobiology!

Again, thank you very much for honoring me tonight and for giving me the opportunity to say a few words.

The ISICR wishes to express its gratitude and appreciation for the continued support of interferon research by Seymour and Vivian Milstein

May 2001 be a happy, healthy and successful year for the Milstein family and all ISICR members

The 2000 Milstein Award

John KIRKWOOD
University of Pittsburgh

Moshe TALPAZ
University of Texas

HONORARY MEMBERSHIP

Peter LENGYEL
Yale University

Young Investigator Award Winners with Ara Hovanessian (L), Awardess Jesus Gil, Dominique Rebouillat, Matt Paulson, Siddharth Balachandran, Pedro Lopez Saura accepting for Silvio Perea and ISICR President Kathy Zoon (R)

2000 Young Investigator Awards

Siddharth BALACHANDRAN
(Miami, USA)
Jesus GIL
(Madrid, Spain)
Matt PAULSON
(NY, USA)
Silvio PEREA RODRIGUEZ
(La Havane, Cuba)
Dominique REBOUILLAT
(Cleveland, USA)

IMPORTANT NOTICE ISICR AWARDS

To be eligible for ISICR 2001 Awards, you must have paid your 2001 membership dues by April 1, 2001

Remember: ISICR members are eligible for the Milstein award, the Milstein Young Investigator Awards, the Christina Fleischmann Award &Travel Awards. Members also receive this great newsletter, a membership directory and free ads in the newsletter and on the ISICR website for open positions

Every path has its puddle.
-- English Proverb

The 2000 Christina Fleischmann Memorial Award

.

Reiko HORAI
(Tokyo, Japan)

Support the ISICR! Renew Your Membership Now!

2001 ISICR Awards

The ISICR Awards Committee invites nominations for 2001 **Milstein Awards**, the **Christina Fleischmann Award,** and **Honorary Membership**. The deadline for the nominations is **May 18, 2001**.

The more sand that has escaped from the hourglass of our life, the clearer we should see through it."
--Jean-Paul Sartre

The Milstein Award ($20,000)

Individuals who have made exceptional contributions to research related to interferons and cytokines either in a basic or clinical field. Milstein awards are made possible by the generous gift of Mr. and Mrs. Seymour Milstein through the Milstein Foundation. This award represents a pinnacle of scientific achievement in our field and is an important landmark of the society.

Honorary Membership

Individuals who have dedicated much of their career to the interferon/cytokine field and have made substantive contributions. Honorary members are the treasure of the society who provide us with a historical perspective and valued research tradition. We invite your nominations for eligible candidates for prestigious symbols of recognition by our society for 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,
Dr. Kathyrn Zoon
FDA, Center for Biol. Evaluation & Research,

Suite 200
1401 Rockville Pike
Rockville, MD 20852-1448
FAX : (301) 827-0440
Email: zoon@cber.fda.gov
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.

Young Investigator Awards ($1,000)

Eligibility: ISICR members and are less than 4 years after 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 4 years after receiving their Ph.D or M.D.. This award is provided by a generous gift of the Milstein Foundation. We urge every eligible individual to apply for the awards. We also ask more senior laboratory advisers to encourage their associates to apply. Send your 2001 Meeting abstract and CV to: Dr. Ara Hovanessian, Chair, ISICR Awards Committee, Institut Pasteur, U De Virol Et Immunol Cell, 28 Rue Du Dr Roux, Paris, 75724, France FAX: 33-1-4061-3012, Email: arahovan@Pasteur.fr We plan on having a check-off box in the abstract form for easy identification of the eligible candidates. A brief note describing your accomplishment, as well as a letter of recommendation from your adviser, are strongly encouraged. The deadline is the same as that of the Meeting abstract for the 2001 ISICR Meeting.

The Christina Fleischmann Memorial Award to Young Women Investigators ($1,000)

The rules for this ISICR award are the same as for the Milstein Young Investigator Award (see above) except for gender and that candidates are less than 10 years after receiving a Ph.D or M.D degree.

Travel Awards

ISICR members who intend to attend the 2001 ISICR meeting in Cleveland, OH are eligible for Travel Awards. They are provided primarily through the membership fees, 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. Send your meeting abstract and a note explaining the need for a Travel Award to Dr. Ara Hovanessian, Chair, ISICR Awards Committee (the deadline is the same as that of the Meeting abstract, May 18).

Student ISICR Membership Dues are only $10 Encourage your students to join. Support their membership dues.

ISICR Guest Symposium at the American Association of Immunology Annual Meeting
April 1, 2001. Orlando FL
10:15AM - 12:15 PM
Room 108

Frontiers in Interferon and Cytokine Research

10:15-10:25
Keiko Ozato, Chair
Introduction

10:25- 10: 50
Nancy C. Reich
Cellular response to virus

10:50-11:15
Robert H. Silverman
Role of the 2-5A/RNase L pathway in interferon action

11:15-11:40
Christian W. Schindler
Type I IFNs and Stat 2 in the immune response
11:40-12: 05
Sergei Kotenko
IL-10 homologues and their receptors

12:05- 12:15
Discussion

International Symposium on Interferon and Cytokines
December 2 – 5, 2001
Havana, Cuba

The Cuban Society for Interferon Research has organized an "International Symposium on Interferon and Cytokines". The conference will be held in Havana, at the theater of the Center for Genetic Engineering and Biotechnology, a 400-seats plenary room. Posters will also be exhibited and discussed in a nearby area with a capacity for 110 presentations. Outstanding invited speakers will attend from several world-leading groups working on interferon and cytokines research. The main topics of the meeting will be:
*Interferons and Cytokines in Cancer
*Interferons and Cytokines in Infectious Diseases
*Interferons and Cytokines in the Central Nervous System
*Interferons and Cytokines in Angiogenesis
*Mechanism of Action of Interferons and Cytokines
*Transfer Factor
*Interferons and Cytokines, Quality Control and Regulatory Aspects.
*New Generations of Cytokines

Please do not hesitate to contact us for further information.
Dr. Pedro Lopez Saura
lopez.saura@cigb.edu.cu

New ISICR Members

The ISICR welcomes the following new members. Contact information can be obtained from the Headquarters Office.

Derek Burke
Cambridge, UK
Scott A. Fisher
Perth, Australia
Danielle A. Rosas
Tempe, AZ
Aristobolo M. Silva
Cleveland, OH
Seyha Seng
Chicago, IL
Carol A. Sledz
Cleveland, OH
Michael Stevens
London, UK
Brian E. Szente
King of Prussia, PA
Mark M. Whitmore
Cleveland, OH
Zam Xu
Cleveland, OH
Mark A. Zubriski
Tempe, AR

REVIEWS OF INTEREST

Bogdan C. The function of type I interferons in antimicrobial immunity. *Curr Opin Immunol*. 2000 Aug;12(4):419-24.

Chaturvedi UC, Agarwal R, Elbishbishi EA, Mustafa AS. Cytokine cascade in dengue hemorrhagic fever: implications for pathogenesis. *FEMS Immunol Med Microbiol*. 2000 Jul;28(3):183-8.

Chen XP, Losman JA, Rothman P. SOCS proteins, regulators of intracellular signaling. *Immunity*. 2000 Sep;13(3):287-90.
Chofflon M. Recombinant human interferon beta in relapsing-remitting multiple sclerosis: a review of the major clinical trials. *Eur J Neurol*. 2000 Jul;7(4):369-80

Fantuzzi L, Conti L, Gauzzi MC, Eid P, Del Corno M, Varano B, Canini I, Belardelli F, Gessani S. Regulation of chemokine/cytokine network during in vitro differentiation and HIV-1 infection of human monocytes: possible importance in the pathogenesis of AIDS. *J Leukoc Biol*. 2000 Sep;68(3):391-9.

Gerszten RE, Mach F, Sauty A, Rosenzweig A, Luster AD. Chemokines, leukocytes, and atherosclerosis. *J Lab Clin Med*. 2000 Aug;136(2):87-92.

Klein TW, Lane B, Newton CA, Friedman H. The cannabinoid system and cytokine network. *Proc Soc Exp Biol Med.* 2000 Oct;225(1):1-8.

Kronenwett R, Martin S, Haas R The role of cytokines and adhesion molecules for mobilization of peripheral blood stem cells. *Stem Cells*. 2000;18(5):320-30.

Lammas DA, Casanova JL, Kumararatne DS. Clinical consequences of defects in the IL-12-dependent interferon-gamma (IFN-gamma) pathway. *Clin Exp Immunol*. 2000 Sep;121(3):417-25.

You will do foolish things, but do them with enthusiasm." --Colette

Makis AC, Hatzimichael EC, Bourantas KL. The role of cytokines in sickle cell disease. *Ann Hematol*. 2000 Aug;79(8):407-13.

Oberg K. Interferon in the management of neuroendocrine GEP-tumors: a review. *Digestion*. 2000;62 Suppl 1:92-7.

Riffo-Vasquez Y, Pitchford S, Spina D. Cytokines in airway inflammation. *Int J Biochem Cell Biol*. 2000 Aug;32(8):833-53.

Rojo D, Suetomi K, Navarro J. Structural biology of chemokine receptors. *Biol Res*. 1999;32(4):263-72.

Straub RH, Miller LE, Scholmerich J, Zietz B. Cytokines and hormones as possible links between endocrinosenescence and immunosenescence. *J Neuroimmunol*. 2000 Sep 1;109(1):10-5.

Tilg H, Diehl AM. Mechanisms of Disease: Cytokines in Alcoholic and Nonalcoholic Steatohepatitis. *N Engl J Med*. 2000 Nov 16;343(20):1467-1476.

Post-Doctoral Position in the Ozato Lab (NIH, USA)

A position is available from October 1, 2001 to study cytokine mediated gene regulation in hematopoietic cells. Our goal is to find the function and the mechanism of the action of two transcription factors ICSBP (IRF-8)[1] and MCAP[2]. Experiences in cell biology and/or protein chemistry, and knowledge on cell cycle regulation are appreciated. This position requires a Ph.D or M.D (or expected).

1 Tamura T. et al. Immunity. 13:155-165, 2000.
2 Dey A. et al. Mol. Cell. Biol. 20. 6537-6549, 2000.

Candidates should contact:
Keiko Ozato, Ph.D,
Deputy Chief
Laboratory of Molecular Growth Regulation,
NICHD, NIH, Bethesda MD 20892,USA
TEL (301) 496-9184
FAX(301)480 9354
ozatok@nih.gov

Staff Fellow Position in the Zoon Laboratory (Center for Biologics Evaluation and Research, FDA, USA)

A position is available as of May 2001 to study IFN signal transduction. The goal of the laboratory's studies is to determine the genes and proteins responsible for the different antiviral and antiproliferative properties of human IFN-alphas. Techniques such as proteomics and microarray will be used to assess the differential expression of RNAs and proteins using protein engineered human IFN alpha hybrids and Daudi cells. This position requires an Ph.D. or M.D. (or expected).The laboratory is located on the NIH campus in Bethesda, MD.

Candidates should contact:
Kathryn C. Zoon, Ph.D.
Director, Center for Biologics Evaluation and Research
Food and Drug Administration
1401 Rockville Pike Suite 200n
Rockville, MD 20852
Telephone: 301-827-0372
Fax: 301-827-0440
Email: Zoon@cber.fda.gov

WWW

ACT

http://www.sanger.ac.uk/Software/ACT/

ACT (Artemis Comparison Tool) is a DNA sequence comparison viewer based on the Artemis sequence annotation tool. In common with Artemis, ACT is written in Java and runs on UNIX, Macintosh and MS Windows systems. It can read complete EMBL and GENBANK entries or sequence in FASTA or raw format. The sequence comparison displayed by ACT is usually the result of a blastn or tblastx search that has been processed by MSPcrunch (for more information see http://www.cgr.ki.se/cgr/groups/sonnhammer/MSPcrunch.html).

ACT is distributed under the terms of the GNU General Public License, and should run on any system with a recent version of Java, but it is currently best supported on UNIX. The ACT web pages contain documentation, download and installation instructions.
Some examples and screenshots can be found here:
http://www.sanger.ac.uk/Software/ACT/Examples

For more information on Artemis see the Artemis web pages:
http://www.sanger.ac.uk/Software/Artemis/

We welcome contributions to ACT and Artemis and suggestions for new features. An email discussion list has been set up for this purpose. To join, send a message to ‘majordomo@sanger.ac.uk' with 'subscribe artemis' in the body (not the subject). Announcements will also be sent to this list.

The development of ACT and Artemis is funded by the Wellcome Trust's Beowulf Genomics initiative, through its support of the Pathogen Sequencing Unit.

BioWurld

http://www.ebi.ac.uk/biowurld/

We are pleased to announce BioWurld, a semi-automated collection of categorised resources (web sites) in the field of BioInformatics and Molecular Biology.

Besides resources that are categorised, BioWurld also included a whole lot of links that are (not yet) assigned to a category and which have been retrieved using various bioinformatics sites as starting point. The information in BioWurld is always up-to-date, as BioWurld's spider visits sites once a week and updates link information (such as title, description, keywords). Broken links are phased out automatically. Currently we have ~400 categorised and ~3000 uncategorised links. We are in the progress of adding more resources to BioWurld, but the main philosophy behind BioWurld is that you can add your own links as well (on the condition that they are related to bioinformatics and molecular biology).

Jean-Jack Riethoven
EMBL Outstation - Hinxton
European Bioinformatics Institute
Wellcome Trust Genome Campus
Hinxton, Cambridge CB10 1SD
UNITED KINGDOM
pow@ebi.ac.uk ICQ#: 3433929
Phone: (+44) 1223 494635
Fax: (+44) 1223 494468
URL: http://industry.ebi.ac.uk/

CD Nomenclature

A concise tabulation of the new CDs can be found at http://gryphon.jr2.ox.ac.uk/cdlist.htm

GeneQuiz

http://www.ebi.ac.uk/research/cgg/services/
(alias):
http://www.genomes.org/services/

We are pleased to announce the release of function assignments for all publicly available genome sequences using GeneQuiz, a system for automated genome sequence annotation.

GeneQuiz has been developed at EMBL in the group of Chris Sander and has been supported and maintained at the European Bioinformatics Institute in the past few years. We have analyzed 31 genomes which contain approximately 73,500 genes. The total amount of data we are releasing amounts to over 70GBytes and should provide a very useful resource for molecular biologists and genomics/bioinformatics experts.

Positive feedback (e.g. was it useful to you?) go to genomes@ebi.ac.uk

Negative feedback (e.g. is a species missing?) go to genequiz@ebi.ac.uk

Please note that many database links (especially from older runs) may not be valid anymore and some views (multiple alignments, 3-D models) may not be functional for all genomes. We are aware of these problems and we are working on them.

Christos Ouzounis
Computational Genomics Group
EMBL-EBI
Cambridge UK
This work was supported by EMBL and the European Commission.

Homeobox Genes DataBase

http://www.iephb.nw.ru/hoxpro
The US mirror is at
http://www.mssm.edu/molbio/hoxpro

HOX Pro DB: structural and functional genomics of hox ensembles

The database HOX Pro contains information about organization, functions and evolution of gene ensembles, key roles in which play homeobox-genes. It is now clear that the homeobox motif is well conserved across metazoan phyla. It has been established experimentally that a subset of genes containing this motif play key roles in the orchestration of gene expression during development. Cross-regulatory functional interactions join these genes-controllers into genetic networks. It is the networks of genes that control patterning of an embryo, morphogenesis, cell differentiation and involved in malignant transformation.

Members of HOX-clusters are of particular importance in specifying the overall animal body plan, and have been the objects of intensive study.
For these reasons, the homeobox containing genes are a natural choice for the subject matter of a database concerned with gene function in development at multiple levels.

The HOX-Pro database is aimed at:

1.analysis and classification of regulatory and coding regions in diverse homeobox and related genes;

2.describing mutations and knock-outs of hox-genes, as well as hereditary diseases related to these genes;

3.graphical representation, comparisons and classification of hox-genes expression patterns and profiles (sea urchin blastula, Drosophila blastoderm and imaginal discs, vertebrate limbs, mammalian brain, human EC cells);

4.comparative analysis of organization of "hox-based" genetic networks the nematode Caenorhabditis elegans the sea urchins Strongylocentrotus purpuratus and other echinids, the fruit flies Drosophila melanogaster and D.virilis, the vertebrates chicken and mouse;

5.analysis of phylogeny and evolution of homeobox genes and clusters.

The HOX Pro contains a broad spectrum of information including images, diagrams and animations. Currently this amounts to approximately 700 html-pages together with 400 images which contain information on 200 groups of genes and 90 promoters, in turn linked to maps of 15 HOX clusters and 9 genetic networks. For today it is known about 700 sequences of individual hox-genes of animals classified approximately in 200 homologous or paralogous groups.
The HOX Pro database contains data on the structural and functional organization of the transcriptional regulatory machinery of homeobox and functionally related genes. The hierarchical organization of transcription regulation of metazoan genes is incorporated into the database schema. HOX Pro includes a hypertext description of the mechanisms of homeobox gene activation as well as the functional characteristics of proteins encoded by homeobox-containing and functionally related genes.

The HOX Pro also contains links to other databases such as GeneBase, FlyBase, TRANSFAC, COMPEL, EPD, EMBL, GeNet and The Interactive Fly.

The long-term goal of HOX Pro is the reconstruction and prediction of functional genetic regulatory pathways from all relevant biological assays. These include not only sequence data but also information about protein binding, expression patterns, and so on. We hope to integrate the molecular aspects of modern developmental biology by utilizing the information pathways that run from sequence data to developing organs and tissues.

Reference: Spirov A.V., Bowler T. and Reinitz J., (2000) HOX-Pro: A Specialized Database for Clusters and Networks of Homeobox Genes, NUCLEIC ACIDS RESEARCH, 28:337-340,
http://www3.oup.co.uk/nar/Volume_27/Issue_01/gkd054_gml.html

Alexander V. Spirov (PhD)
The Sechenov Institute of Evolutionary Physiology &
Biochemistry, Thorez Pr. 44,
St.Petersburg, 194223, Russia
Fax +7 (812)552 3012;
Tel: + 7 (812)552 3219
http://www.iephb.nw.ru/~spirov
Email: spirov@iephb.nw.ru

Human Genome Central

www.ncbi.nlm.nih.gov/genome/central
www.ensembl.org/genome/central

Spring board
for Human genome data

The vast majority of the human genome is now publicly available. About 25% of the genome is in finished form, while the great majority of the remainder is in draft form. As with other organisms, the full primary source data is available in each of three public databases: Genbank, EMBL and DDBJ. The information is being searched and analyzed by tens of thousands of scientists in academia and industry. Still, it is a daunting and time-consuming task for users to directly analyze the primary source data. Many users would like access to ancillary information and tools that provide an ongoing picture of the genome that is both comprehensive and comprehensible. Such information includes the overlaps between clones; the correct genomic location of each clone; an integrated genomic sequence that merges the individual clones; and annotation of gene content. In fact, such resources have been developed and are freely available - but they are not widely known. For ease of access, we have created a master web site called "Human Genome Central" containing a brief listing of links

to some of the most useful public resources; further links to additional sites can be found within them. The web sites will be regularly updated with new information.

Ensembl
http://www.ensembl.org
Ensembl allows access to DNA and protein sequences with automatic baseline annotation.

NCBI
http://www.ncbi.nlm.nih.gov/genome/guide/
Can view chromosomes and maps and loci with links to other NCBI resources.

Oak Ridge Genome Channel
http://compbio.ornl.gov/tools/channel/
Contains Java viewers for Human genome data.

BLAST searches against Draft data
http://www.ensembl.org/Data/blast.html
Search protein or DNA sequence against human draft data.

The SNP consortium
http://snp.cshl.org/
Includes a variety of ways to query for SNPs in the human genome.

OMIM
http://www.ncbi.nlm.nih.gov/Omim/
OMIM contains information about human genes and disease.

Gene Map '99 (NCBI)
http://www.ncbi.nlm.nih.gov/genemap99/
Gene map 99 contains data and viewers for radiation hybrid maps.

Human genome maps
http://genome.wustl.edu/gsc/human/Mapping/
This page contains links to clone and accession maps of the human genome.

Human Genome Project Working Draft Sequence - UCSC
http://genome.cse.ucsc.edu/goldenPath/
This page contains an assembly of the current draft of the human genome.

Ethical, Legal, and Social Issues
http://www.ornl.gov/hgmis/elsi/elsi.html
http://www.nhgri.nih.gov/ELSI/
Contains information, links and articles on a wide range of issues.

InterProScan

ftp://ftp.ebi.ac.uk/pub/databases/interpro/iprscan/

InterPro is a collaborative project aimed at providing an integrated layer on top of the most commonly used protein signature databases by creating a unique, non-redundant characterisation of a given protein family, domain or functional site. The InterPro project home page is available at http://www.ebi.ac.uk/interpro/.

InterProScan is a tool that scans a given protein sequence(s) against the InterPro signature databases (at the moment - PROSITE, PRINTS, Pfam and ProDom). InterProScan has a robust and efficient (parallel) architecture that could benefit from network distributed computing and support of UNIX queuing systems, such as LSF.

Evgueni.Zdobnov@EBI.ac.uk

Molecular Dynamics Salon

http://www.ks.uiuc.edu/Services/MDSalon/

The Theoretical Biophysics Group at the University of Illinois is an NIH Resource for Macromolecular Modeling and Bioinformatics. We serve the structural biology community by developing software and methods, and through direct collaboration with experimental biologists. We have seen the need for an interactive forum for users of molecular dynamics software and techniques, of all experience levels, to exchange views and expertise.

As a service to the molecular modeling community, we are constructing an online gathering place. The first areas of MDSalon available are discussion forums catering separately to developers of MD software and to those whose are primarily interested in its application to simulations. There are currently two main forums, but more will be added as popular subtopics emerge. We will also be adding databases of software and user-contributed examples, as well as a special developers' area featuring collected benchmarks.

NetChop

http://www.cbs.dtu.dk/services/NetChop/

For prediction of proteasomal cleavages. Proteasomes, major proteolytic components in eukaryotic cells, play an important part in the host immune response, as they generate major histocompatibility class I (MHC I) ligands. Prediction of

proteasomal cleavage sites is a difficult task because the enzymatic specificity is highly complex, and the data available is very sparse.

The server, based on artificial neural networks, is trained on experimentally verified, naturally processed cleavage sites (i.e. MHC I ligands). The method is able to predict most of the assigned non-cleavage sites, and has a somewhat lower performance on the assigned cleavage sites, reflecting the stochastic nature of proteasomal activity. This tool, in combination with a predictor of MHC binding capacity, would give a more complete prediction of the generation and presentation of peptides on MHC I molecules.

Can Kesmir
Centre for Biol. Seq. Anal.
Dept of Biotech, Bldg-208
The Technical Univ of Denmark
Lyngby, DK-2800, Denmark
Email: kesmir@cbs.dtu.dk
Tel: 4525-2472
Fax: 4593-1585

PROSPECT

http://compbio.ornl.gov/structure/prospect/

The Computational Protein Structure Group of Oak Ridge National Laboratory would like to announce the release of PROSPECT Version 1.0. PROSPECT (PROtein Structure Prediction and Evaluation Computer Toolkit) is a threading-based protein structure prediction system. PROSPECT is particularly designed to recognize structural folds whose sequence have no significant homology to the target sequence. PROSPECT has a number of unique features --

* The system guarantees to find the globally-optimal alignments for a given energy function with any combination of the following terms:
(1) mutation energy (including position-specific score matrix derived from multiple-sequence alignments),
(2) singleton energy (including matching scores to the predicted secondary structures),
(3) pairwise contact potential (distance dependent or independent), and
(4) alignment gap penalties.

* The system allows users to easily incorporate biological knowledge and constraints into the threading process to find optimal alignments under the specified constraints, which may include:
- specified disulfide bonds
- specified active sites
- specified secondary structures
- specified NOE restraints in NMR
- specified gaps with no gap penalties

*The system provides a prediction confidence assessment for each prediction based on a neural-net method and an evaluation of compactness of the predicted structure.
* A Web-based interface is available to browse the threading alignments and 3D structures.

PROSPECT is free of charge to academic users. Please contact the authors: (Ying Xu at xyn@ornl.gov or Dong Xu at xud@ornl.gov) about the download information. For commercial users, please contact the authors for licensing information.

Protein Spotlight

A new periodical review from Swiss-Prot

http://www.expasy.ch/spotlight/

"What do you think of 'Protein Spotlight'?", suggested Amos Bairoch. I may have looked a little blank but I could see from the expression on his face, that it was no suggestion but more a definite proposal. It was a good title. I immediately imagined a protein on stage, under heavy spotlight, peeling off its clothes to let us discover its primary structure. In fact, Brigitte Boeckmann who created the logo, thought up something quite in the same line, as you will notice.

"It has to be a periodical review. Each article must center on a specific protein or group of proteins, whose sequences are in the database. The articles must be informative yet not too detailed - the detail can be found in the Swiss-Prot entries. They should be pleasant to read and illustrated. Cross-references should be made to Swiss-Prot entries and articles mentioned in the text." I left the Swiss-Prot group three years ago. I came back for Protein Spotlight!

Well, after some sweat on behalf of quite a few, here is the first issue of Protein Spotlight. For the time being, it will appear on a monthly basis. However, articles following the same rules as those given above are more than welcome and our cruising speed could increase to a fortnightly issue. Articles can be submitted to the e-mail address given below.

I invite you to visit the Protein Spotlight home page on the ExPASy Web server or one of its mirror sites. From there you can subscribe and receive new issues of the journal by email. They can

be sent to you in HTML or PDF format.

I hope you will enjoy this new service from the Swiss-Prot team. Give us your first impressions, good or bad, we would be glad to hear from you.

Vivienne Baillie Gerritsen,
Science writer.
SWISS-PROT group at the Swiss Institute of Bioinformatics
E-mail: spotlight@isb-sib.ch

A FOOD OFFENSE RECIPIE

Hot Artichoke and Red Pepper Dip

1 medium leek, thinly sliced and quartered or 1/3 cup sliced green onion
2 tsp. Margarine or butter
1 14-oz. can artichoke hearts, drained and coarsely chopped
1 cup grated Parmesan cheese
! cup mayonnaise, salad dressing or light mayonnaise dressing (Note: do not use fat-free varieties. Dip will not set)
1 7-oz. Jar roasted red sweet pepper, drained and coarsely chopped
1/8 tsp. Ground pepper
2 Tbsp. grated Parmesan or Romano cheese
1 Tbsp. snipped parsley
assorted crackers, flat breads

If serving dip immediately, preheat oven to 350. In a medium skillet, cook sliced leek in hot margarine or butter until tender but not brown. Remove from heat. Stir in artichoke hearts, the 1 cup parmesan cheese, mayonnaise, roasted red peppers and pepper.

Transfer to an 8 inch quiche dish or 9 inch pie plate, spreading evenly. Sprinkle with the 2 tablespoons Parmesan cheese and the parsley. If desired cover and chill for 24 hours before baking.

To serve, bake, uncovered, for 20 minutes or until heated through.

Serve with assorted vegetable dipping sticks, crackers or flat bread

ADDITIONAL ASSOCIATE EDITORS STILL NEEDED!!!

The ISICR newsletter still needs associate editors to help with this newsletter. We welcome volunteers from outside the US to contribute information relevant to interferon and cytokine research in their home countries. Think of the <u>status</u> in being an ISICR newsletter editor! Few people can make this claim to fame! Contact Howard Young to join this soon to be award winning* team!!

***as soon as someone gives us an award**

CLINICAL TRIALS

Study ID Numbers 199/15255; MSKCC-99101; NCI-G00-1814 **Interferon alfa-2b** in Treating Patients With Advanced Low-Grade Non-Hodgkin's Lymphoma. New York Memorial Sloan-Kettering Cancer Center, New York, NY 10021, Contact: Carol S. Portlock, Study Chair, Tel: 212-639-8109

Study ID Numbers 199/15216; NYU-9938; NCI-101 Thalidomide Plus **Interferon alfa** in Treating Patients With Progressive Liver Cancer That Cannot be Surgically Removed. Kaplan Cancer Center, New York, NY, 10016. Contact: Franco M. Muggia Tel: 212-263-6485

Study ID Numbers 199/15155; E-2898 **Interferon alfa-2b** With or Without Thalidomide in Treating Patients With Metastatic or Unresectable Kidney Cancer. Eastern Cooperative Oncology Group. Michael Steven Gordon, Study Chair

Study ID Numbers 199/12934; MDA-ID-96253; NCI-T96-0106. Tumor Vaccine and **Interferon gamma** in Treating Patients With Refractory Epithelial Ovarian. Cancer. University of Texas - MD Anderson Cancer Center, Houston, TX 77030 Contact: Ralph S. Freedman Study Chair Tel: 713-792-2764

Study ID Numbers 199/13409; EORTC-30955 **Interleukin-2**, **Interferon alfa**, and Fluorouracil Compared to No Further Treatment in Treating Patients With Kidney Cancer. EORTC Genito-Urinary Tract Cancer Group Pieter H.M. de Mulder & Martin Eric Gore Study chairs

Study ID Numbers 199/14683; CCF-IRB-3063; NCI-T99-0028. **Interleukin-12** and **Interferon alfa** in Treating Patients With Metastatic Kidney Cancer or Malignant Melanoma. Cleveland Clinic Cancer Center, Cleveland, OH 44195, Contact: Ronald M. Bukowski, Study Chair Tel: 216-444-6825

Study ID Numbers 199/14475; OSU-99H0185; NCI-T99-0032. **Interleukin-12** and Trastuzumab in Treating Patients With Cancer That Has High Levels of the HER2/neu Protein. Arthur G. James Cancer Hospital - Ohio State University, Columbus, OH 43210. Contact: Charles L. Shapiro Tel: 614-293-7530

Study ID Numbers NIAMS-043. **Tumor Necrosis Factor** (TNF) in Ankylosing Spondylitis. UCSF-Clinical Trials Center, 533 Parnassus Avenue, U-380 San Francisco, CA 94143-0792. Contact: Maureen Fitzpatrick Tel: 415-502-5108 Email: fitzpatrick@medicine.ucsf.edu

Trials at the Warren G. Magnuson Clinical Center National Institutes of Health, Bethesda, Maryland, **20892-4754**,
Tel: 1-800-411-1222.
Email: prpl@mail.cc.nih.gov

Study ID Numbers 94-I-0203. Peripheral Blood **T Cell Cytokine** Production in Asthmatics

Study ID Numbers 93-I-0214. Cytokines **HuMig** and **IP-10**: Expression in and Effects on Human Leukocytes

Study ID Numbers 98-N-0160 Recombinant Human **Interferon Beta-1a** (Avonex) for the Treatment of Patients with HTLV-1-Associated Myelopathy (HAM)

Study ID Numbers 99-I-0089 **Interferon Gamma** Administration in Leukocyte Adhesion Deficiency Type I

Study ID Numbers 94-I-0149 Treatment of Multiply Drug Resistant Tuberculosis with **Interferon Gamma**: A Phase I/II Dose Escalation Trial

Study ID Numbers 00-C-0121. Combination Therapy of **Interleukin-12** and **Interleukin-2** to Treat Advanced Cancer

Study ID Numbers 01-I-0040A Randomized, Double-Blind, Placebo-Controlled, Dose-Finding Safety Study of Two Parallel Dose Levels of Subcutaneously Administered Human **Monoclonal Antibody to Interleuken-12** (J695) in Patients with Active Crohn's Disease

Study ID Numbers 99-I-0091. Safety and Immunogenicity of a Vaccine for Cutaneous Leishmaniasis Using Recombinant Human **Interleukin-12** and Aluminum Hydroxide Gel as Adjuvants

Study ID Numbers 99-EI-0047. **TNRF:Fc** to Treat Eye Inflammation in Juvenile Rheumatoid Arthritis

ISICR COMMITTEE MINUTES November 2000 Amsterdam

Board of Director's and Advisory Committee
November 5, 2000

Present: Drs. Samuel Baron, Ferdinando Dianzani, Robert Friedman, Otto Haller, Ara Hovanessian, Keiko Ozato, Sidney Pestka, Huub Schellekens, Bryan Williams, Kathryn Zoon

The Board of Directors meeting was held together with members of the Advisory Board. The meeting was opened by Dr. Zoon at 5:00 p.m. A motion was made by Dr. Pestka and seconded by Dr. Ara Hovanessian to apply $1,500 per honorary member to cover cost of their attendance to the meeting. This was unanimously approved by the Board of Directors.

Dr. Zoon noted that the website is now officially managed by the FASEB. The Society will charge $250 per year to corporations who want to have their websites linked to our website. In addition, other societies will be charged $100 per year for links to our website unless there is a reciprocal link to our Society on their web pages. Corporate sponsors will get links to our website at no cost. The motion to approve this suggestion was made by Dr. Pestka and seconded by Ara Hovanessian, and approved by the Board of Directors.

Dr. Zoon suggested a change in the dues as follows. The regular rate of $50 for one year, $90 for two years, $120 for three years increasing from the rate of $50 per year, $80 for two years and $110 for three years. For graduate students the amount will remain $10 per year. The fee for Emeritus members would be $25 per year increasing from $10 per year. Putting this in the form of a motion was made by Dr. Pestka and seconded by Dr. Otto Haller. It was approved by the Board of Directors.

Dr. Zoon suggested that we establish electronic membership forms for the Society on our web page. This will be made available for an addition cost of $2,000 to the Society paid to the FASEB. This proposal was considered and the Board of Directors suggested that Dr. Zoon look into the possibility that the Federation of Advancement in Education and the Sciences (FAES), which resides in Bethesda, could possibly handle the membership and electronic registration. She will look into this and provide the information

for evaluating both the FASEB as well as the FAES for this option.

Over the past few years the ISICR has considered becoming an associate member of the FASEB. The Board of Directors voted not to consider this at this time because of the extra cost involved.

The costs of the FASEB services to the ISICR were evaluated. The costs will go up from $5.75 to $6.15 per member for the coming year. In addition, the data base management will cost $150 per year.

The financial report was provided by Dr. Baron and the budget for 2001 was approved by the Board of Directors. The Secretary's Report was provided by Dr. Pestka. He also updated the Board of Directors as to the fund raising activities as well as the current status of the Society.

The number of councilors from various countries was considered and the Board of Directors agreed with the suggestion that there should be one councilor for each country with a minimum of 10 members. After that there would be one additional councilor for every additional 25 members.

Dr. Zoon brought up the consideration of the merger of the ISICR with the International Cytokine Society (ICS). This was discussed in detail with the suggestion that we continue to have our joint meetings and have several meetings to evaluate the usefulness of the merger to our Society as well as to the ICS. A meeting was held later in the week where members of the ISICR and members of the ICS met to discuss this with the conclusion that discussions will continue to proceed to resolve many issues that would need to be addressed by both Societies. In addition, both Societies would need to have the approval of their membership to move forward.

Archives Committee

November 5, 2000

Present: Dr. N.B. Finter (Chairman), Dr. R.M. Friedman, Dr. S. Baron, Dr. F. Dianzani, Dr. Y. Kawade. Dr. A. Billau was unable to be present. The Interferon Archive is held on behalf of the I.S.I.C.R. by the Wellcome Library for the History of Medicine in Euston Road, London.

Dr. Finter reported that contributions had now been received for the Archives from 17 scientists who had been active in the interferon field before 1970, and others had been promised. It was agreed that contributions should be sought from a further 18 workers and also from 15 who had entered the field at a later date but pioneered studies in some new area of interferon science. A few contributions that had been received had not been in accordance with the published guidelines for the preparation of material for the Archives and, for example, had included inadequate biographical material or put too much emphasis on current research activities. It was agreed that those concerned should be invited to provide a new and more appropriate contribution.

Some of the contributions sent for the Archives might be of general interest to those now in the field. It was suggested that, with agreement from the authors concerned, these might be offered to the Editors of the I.S.I.C.R. newsletter for possible inclusion in a future issue. Some documents that might be valuable for the Archive are held by organizations such as pharmaceutical companies, that might not be willing to provide their files, minutes of meetings, etc. if these were immediately accessible to the general public. It was agreed to try to arrange that potentially sensitive material could be held separately and not released until some distant future date, e.g. after 40 years.

Dr. R.M. Friedman was appointed as Chairman of the Archives Committee for the period 2001-2006.

There being no other business, the meeting closed at 17.30 hours.

As long as one keeps searching, the answers come. -- Joan Baez

Awards Committee

November 5, 2000

Chairman: Ara G. Hovanessian
Members: Keiko Ozato, Paula Pitha-Rowe, Ganes Sen, Robert Silverman, Ian Kerr (excused) and Christian Schindler (excused).

The chairman presented a brief summary of the Travel Awards granted for the attendance of the Amsterdam meeting. The budget of the ISICR Travel Award for the year 2000 was $44,000. The awardees were selected by the members of the Awards committee according to the scientific excellence of individual abstracts. Fifty-five travel awards were granted out of 85 applications; the awards ranged from $500 to$1,200, among which 25 candidates received at least $1,000 each.

Discussion was initiated first for future potential candidates for Honorary ISICR Members and the Milstein Awardees. Further discussion concerned the practical questions in the choice of different awards. In view of the poor quality of applications for the Christina Fleischmann Memorial Award for Young Women Investigators, it was decided that the awardee must be a woman who is less than 10 years from the time of receipt of her degree instead of the 4 year limitation that was requested previously. For the travel awards, it was decided that the committee will consider at a lower priority the principal investigator for a travel award compared to younger researchers in a given laboratory. Consequently, for next year it will be stated that Senior investigators have

a lower priority for the Travel Award. Finally, in order to facilitate the selection of candidates, the committee has agreed on an Award Application Form that has to be completed by the candidates. This form was submitted to Dr. George Stark, the Chairman of the Cleveland meeting.

Finance Committee

November 7, 2000

Present: Samuel Baron, Ernest Borden, Ferdinando Dianzani, Gianni Garotta, Heinz-Kurt Hochkeppel, Raymond Kaempfer, Masayoshi Kohase, Sidney Pestka, Bryan Williams, Kathryn Zoon

The meeting was opened by Sam Baron at 12:15 p.m. Dr. Baron summarized the need for the Finance Committee to have a continual and effective liaison with pharmaceutical companies. To that end he felt that we should have personnel on the Committee who have direct links with various pharmaceutical companies so that the Committee can be quite effective. There were many comments about the development and the use of the Committee. All members present at the Finance Committee meeting will obtain a copy of the letter of solicitation that Dr. Pestka, the secretary, has sent. They will provide their comments to Dr. Baron and to Dr. Pestka. It was suggested that the Newsletter contain additional items relevant to clinical programs such as information that is on the NIH.clinical trials.gov website.

ISICR BUDGET FOR 2001

Accounting	$ 2,700
Administrative Expenses – FASEB	$ 33,800
Administrative Expenses B Miscellaneous	$ 500
Awards Travel to 2001 Meeting	$ 60,000
Bank Charges	$ 250
Consulting	$ 1,800
Meeting Expenses	$ 11,000
Office Expenses:	
President	$ 500
Secretary–	
-General	$ 6,500
- Wages	$ 10,500
Treasurer	$ 250
Travel B President's Office	$ 4,000
TOTAL	$131,800

PROJECTED INCOME B 2001

Dues	$ 25,000
Corporate Sponsors	$ 60,000
Amsterdam Meeting Profit	$ 50,000
Other (Advertising)	$ 6,000
TOTAL	$141,000

Comments on the 2001 Budget
Accounting Report B
Estimated increase of $200.

Administrative: FASEB Expenses B
Increased from actual $30,699 for 2000 to $33,800 for 2001.

Administrative: Miscellaneous B
Florida registration fee and other small items.

Travel Awards 2001 B
Reduced to $44,000 from the $50,000 that we budgeted in 2000 for the Amsterdam meeting. We consistently get $6,000 from the Milstein Foundation for the Milstein Young Investigator's Award.

Consulting B
We currently pay George Galasso $450 per quarter to consult with FASEB.

Meeting Expenses B
An advance of $10,000 for the next annual meeting and budgeted $1,000 for the AAI annual meeting.

Office Expenses for President, Secretary and Treasurer B Based on their estimates.

Travel: President's Office B
Continued at $4,000. In the past this item has been only partly used to defray some travel expenses to the annual meeting of the honorary awardees and contingencies.

International Council

November 5, 2000

Dr. Zoon opened the meeting at 1:30. Members of the International Council who attended the meeting are as follows: Kathy Zoon, USA; Sidney Pestka, USA; Otto Haller, Germany; Ferdinando Dianzani, Italy; Masayoshi Kohase, Japan; Samuel Baron, USA; Philip Marcus, USA; Robert Friedman, USA.

Dr. Zoon noted that committee members are needed for the Archives Committee and a number of nominations were suggested by the members present. In addition, Dr. Zoon welcomed members of the Society to suggest nominations for this committee or to contact her if they are interested in being members of the Archives Committee.

A number of recommendations from the Membership Committee to the Society and the Board of Directors were made. The Membership Committee has been very effective in their suggestions to initiate new programs and procedures that have been quite effective. The Membership Committee requested that the FASEB follow up on mail that is undelivered to members. Many members have indicated that mail did not reach them for the membership renewals. Dr. Zoon will follow this up with the FASEB. The Membership Committee also suggested that the registration form at the annual meetings should have a check-off for a one year membership in the ISICR if a registrant wishes to do so. This would be quite reasonable as the cost would then be essentially the same as registering as a nonmember. This would increase membership of the Society.

Dr. Zoon summarized the change of the meeting from Austria to Italy. She also noted that the members from Austria will participate in organizing and assisting the development of the meeting in Italy. In addition, she announced that a $10,000 award will be made by the organizers of the Austria meeting to

the ISICR for one or more awards at the next meeting.

Dr. Zoon summarized a proposal to raise dues The regular rate of $50 for one year, $90 for two years, $120 for three years. This is an increase from the rate of $50 per year, $80 for two years and $110 for three years. For graduate students the amount will remain $10 per year. It should be noted that Emeritus members would be charged $25 per year.

There was an open discussion of the merger of the ISICR and the ICS.

A clinical subcommittee was discussed previously and Dr. Zoon will proceed to establish this officially. It is hoped this will provide more clinical representation at our meetings and will provide a committee to promote clinical programs at our meetings.

It was brought up that there might be possible opportunities for outreach programs with other societies: The American Association of Cancer Research, ICAAC International for joint sessions, also the American Society for Hematology and others. These organizations have offered to have the ISICR sponsor a symposium at their meetings as we have done with the American Society of Immunologists. In addition, we would offer these societies joint sessions or symposia sessions at the ISICR meetings as well.

Dr. Pestka presented the Secretary's Report. Dr. Baron followed with the Finance Report. A motion from the floor that was approved by the Board of Directors was made to endorse the budget for 2001.

Meetings Committee
November 5, 2000

The meeting was called to order on Sunday, November 5, 2000 at 4:00 p.m.
Present were Janine Doly, Joan Durbin, Gianni Garotta, Pietro Ghezzi, Paul Hertzog, John Hiscott, Michael Katze, Santo Landolfo, Allen Lau, Ke-Jian Lei, Xin, Yuan Liu, Larry Pfeffer, Huub Schellekens, Bryan Williams (for George Stark), and Kathy Zoon. The meeting was chaired by Christine Czarniecki.

Review of ICS/ISICR discussions regarding joint meetings.
Kathy Zoon summarized the discussions that took place through the last year regarding the change in Venue for the 2002 Joint ICS/ISICR Meeting from Vienna, Austria to Turin, Italy. Scott Durum (President of the ICS) called Kathy to discuss the increasing difficulties related to the strained political situation in Vienna. The ICS had strong feelings that they might have to pull out of the joint meeting. At that time Kathy informed the ISICR Meetings Committee of the situation and we polled the Committee members and the ISICR Board of Directors. The opinions were mixed and no consensus could be reached. At the same time our colleagues in Italy proposed Torino as a potential site. This site would be close in proximity to Austria and would allow our Austrian colleagues to participate in the Organization of this meeting. This proposal was reviewed and approved by the ISICR Meetings Committee and then the ISICR Board and the venue for the 2002 joint ICS/ISICR Meeting was officially changed from Vienna, Austria to Torino, Italy.

Kathy and Christine thanked the Austrian and Italian organizers as well as the committee members for all of their efforts in resolving this difficult issue.

1999 Meeting - Paris
The Committee thanked Janine Doly and the Organizers for their efforts in making the meeting in Paris a scientific and financial success. Janine presented the financial report from last year's meeting in Paris. There were 500 attendees: Registration and donations brought in $297,365 with the following breakdown: $233,315 from registration fees; $52,050 from contributions; $12,000 provided by the ISICR in 1998. After expenses of $219,868, approximately $66,195 was returned to the Society.

2000 - Amsterdam, Netherlands:
Huub Schellekens reviewed the status of the current meeting joint ISICR/ICS Meeting in Amsterdam. The Preliminary Financial Statement for the meeting reported 649 participants representing 35 countries. Total income was reported as 1.064.365 Dutch Guilders of which 372.805 is from Sponsors and Exhibits and 691.560 is from Registration fees. Projected expenses are 1.043.000 leaving a surplus of 21.365. Huub discussed the difficulties of raising funds from Sponsors. The general consensus was that more clinical topics need to be included in meetings. There was discussion regarding new topics that should be added to the Meeting Program. Suggestions were: Results of late Phase 2 and 3 Clinical Studies; Progress in New Drug Delivery; New Technologies such as Genomics and Pharmacogenetics.

There was discussion of issues related to joint meetings between the ISICR and other Societies. Huub stated that throughout the organization of this meeting there were instances where the rules and Guidelines of both societies (ISICR and ICS) had to be ignored to be able to go forward. As an action item, Huub agreed to provide the ISICR Meetings Committee with a summary of the particular issues. He will get input from others who have been involved in past point meetings, such as Ray Kaempfer. This item will be addressed again at the next meeting in Cleveland.

2001 - Cleveland, Ohio:
Standing in for George Stark, Bryan Williams reported on the activities for the 2001 meeting. This meeting of the ISICR will take place October 7 to 12, 2001 at the Sheraton in downtown Cleveland. The Outline

of the Program is complete and the chairpersons have been chosen. The ISICR Meetings Committee reminded Bryan that the Chairpersons must be active members of the ISICR. There was some discussion of fund-raising. During the past year George Stark had approached the ISICR Meetings Committee inquiring if there was a database of sponsors who have contributed to past meetings. There currently is no such database. There was discussion of the usefulness of such information since the contact person at these companies changes so frequently. However the general opinion was that there would be some value in providing sponsor lists to future meetings organizers. Therefore, the committee requests that the ISICR Board address the possibility of the Secretary's Office generating and maintaining such a database.

2002 B Torino, Italy
Santo Landolfo and Gianni Garotta presented a report on the status of the 2002 meeting. This meeting will be a joint meeting of the ICS, ISICR and SLB (Society for Leukocyte Biology). It will be held on October 6-11, 2002 at the Lingotto Congress Center in Torino Italy. An Announcement for this meeting was distributed in Amsterdam. An Executive Committee has been established. This committee of 5 people must sign an agreement to establish financial responsibility with the Italian Government. A National (Local) Committee has been established and at least 4 of these members are involved in clinical studies. The International Committee has yet to be formed. A budget has been prepared using an estimate of 800-1000 participants. The Organizers will be choosing which journal (of the official journals of the three Societies) in which to publish the meeting abstracts.

There was a discussion of the following issues related to joint meetings: Control of the Program; choice of session chairs; registration for invited speakers; how to split funds (both surplus and debit). The Meetings Committee reminded the Organizers that for past joint meetings the recommendation has been to have each session chaired by one ICS member and one ISICR member.
The organizers are considering two satellite symposia: one on "Drug Delivery" and one on "Toxicity of Cytokines". These symposia would be held at a location different from the meeting center (25 km from the meeting center) and transportation would be provided. A Registration fee structure would be established. The Meetings Committee reminded the Organizers that in order for any satellite symposium to have sponsorship of the ISICR the program for the symposium must be reviewed and approved by the Meetings Committee for scientific quality and fair balance.

The following two options were then discussed. One satellite could be held on the day before the main meeting (Saturday) and one on the day after the main meeting (Friday). The general consensus was that it would be difficult to get people to stay that length of time. The other option is to have the two symposia at the time of the main meeting, overlapping with sessions at the main meeting. The concern was raised that the latter option risks drawing attendance away from the main meeting. The Organizers asked that these options be presented to the ISICR Board for their feedback.

2003 B Melbourne, Australia
The ISICR Board has approved Melbourne as the meeting site for the 2003 ISICR Meeting. Paul Hertzog has been working on plans for this meeting and he presented a proposal to move the meeting site to Cairns. The proposal included many advantages for the Cairns site. The costs for this venue would be lower than Melbourne; cost of accommodations will be lower; there is a good convention center. After discussion, the ISICR Meetings Committee voted to recommend to the ISICR Board that the meeting site be changed from Melbourne to Cairns.

2004 B Montreal
John Hiscott informed the ISICR Meetings Committee that he will be leaving Montreal. There was then some discussion regarding the 2004 Meeting site. The meeting for that year is intended to be a joint meeting with the ICS and the ISICR and ICS Boards are in discussion regarding possible meeting sites.

Dr. Xin Yuan Liu once again presented his proposal for a meeting in Shanghai. After some discussion it was decided that Dr. Liu would bring his proposal to the ICS meeting that would be held in Amsterdam as a possible choice for 2004 and if it was not chosen for 2004 he would request Shanghai to be considered for 2005. Dr. Michael Katze proposed Seattle as an alternative site for 2004. The discussion of meeting sites for 2005 will be discussed next year in Cleveland.

[Post meeting note: the ICS proposed to form a joint steering committee (made up of ISICR and ICS members) that would be responsible for choosing a site for the 2004 meeting.]

Other business:
There was no other new business and the meeting was adjourned.

Respectfully submitted,
Christine W. Czarniecki
Chair, ISICR Meetings Committee

Membership Committee

November 6, 2000

The ISICR Membership Committee met on Monday, November 6, at the Rai Congress Center in Amsterdam, from 12:15 to 13:45. Present were Mariano Esteban, Heinz-Kurt Hochkeppel (chair), Eliane Meurs, Howard Young, and Kathryn Zoon (part time).

First and central agenda item was the status of ISICR Membership.
As of October 2,2000 there were 657 paid members (that is 528 Regular Members, 111 Student Members, 7 Corporate Sponsors and 11 Emeritus Members). In addition, there are 19 Honorary Members and 26 Associate Members.Unfortunately, there were 156 active members who had paid in 1999 but who have not renewed, and 137 active members who paid in 1998 but did not renew (a total of 293 Members who have not renewed). Deleted from the data base were 120 Members whose last dues payments were in 1997 as well as additional 60 Members whose last payments were in 1996. 134 Members have paid in advance for 2001 and 65 for 2002.

The Membership Committee states that the Society is still loosing too many Members and that ISICR has this year the lowest total number of paid Membership, in comparison to the years 1995-99. Therefore, certainly additional efforts have to be made to prevent further loss of Membership and to recrute new members.

Last year the Membership Committee made 14 excellent recommendations which should help to improve ISICR Membership. However, only some of these were implemented. The Membership Committee has addressed this issue together with Kathy Zoon who participated in this year's Committee Meeting . Kathy Zoon reported that she had recently discussed the recommendations with the Board of Directors. The situation is as follows:

Recommendation 1: Letters urging renewal should go to members at least twice/year.
An online internet Membership is planned via FASEB. This should make it easier to track down former Members.

Recommendation 2: It was recommended that a questionnaire be included with renewal statements for those members who chose not to renew.
It was agreed on that such a letter is sent by FASEB to all non renewing Members but that the Membership Committee should design some standard boxes for the letter giving reasons for not renewing Membership which could simply be crossed, e.g.

A. No longer doing Cytokine/interferon research
B. Society too expensive
C. No benefit to membership

Recommendation 3: It was recommended that the Society give a 1year Membership to meeting attendees at the joint ISICR/ICS meetings who are not ISICR Members.
Kathy Zoon suggests a 1 year payless option period. However, after 1 year such new Members should contacted and encouraged to pay their dues.
The Membership Committee agrees with this recommendation.
Recommendation 4: Establishment of an e-mail database for Members in Europe and Asia (i.e. ListServ).
This recommendation still needs to be addressed. FASEB should be approached about the cost for establishing/maintaining this or a society-wide ListServ.

Recommendation 5: Establish a link to ISICR Membership information for electronic subscribers to JICR
This link has been established.

Recommendation 6: Members must be paid up by April 1 to be eligible for any ISICR award.
Kathy Zoon that this should be taken up directly with the Award Committee.

Recommendation 7: Chairpersons at the Annual Meeting should be current in their Membership dues. Otherwise they should not be eligible to chair sessions.
Kathy Zoon will bring this to the attention of the Meeting Committee.

Recommendation 8: ISICR principle investigators should be encouraged to support the initial Membership for their students.
Kathy Zoon: Howard Young should regularly highlight this recommendation in the ISICR newsletter.

Recommendation 9: For each student or postdoc membership the ISICR sponsor name should be included in the FASEB data base.
Kathy Zoon: FASEB will now do this.

Recommendation 10: The importance of renewal & benefits of Membership should be highlighted in each issue of the ISICR newsletter.
This is Howard Young's responsibility.

Recommendation 11: ISICR Committee Members should be current with their dues.
Kathy Zoon: FASEB needs to cross-check membership status of the individuals on the various ISICR Committees.

Recommendation 12: The JICR should reconsider "a hot paper of the year" award.
Kathy Zoon: This needs to be acted on by the Publications Committee.

Nomenclature Committee

November 5, 2000

The meeting was called to order at 3:25 pm on Sunday, November 5, 2000 at the Annual Meeting of the ISICR at the RAI Convention Center in Amsterdam. Members present were Erik Lundgren (chair), Paul Hertzog, Jerome A. Langer, Bernard Lebleu, Richard Pine, and Margaret Sekellick. Philip Marcus attended briefly.

Chicken Interferons. The discussion began with a review of the information presented at the 1999 committee meeting and the criteria used to classify the various avian interferons found to date. A revised

proposal that addressed some of the issues discussed at the 1999 meeting was submitted by John W. Lowenthal, Peter J. Staeheli, Ursula Schultz, Margaret J. Sekellick and Philip I. Marcus. The main criteria for classifying the chicken α interferons as distinct from the one chicken β gene found included structural similarities such as the position of cysteine residues within the polypeptide chain that are very similar in chicken, mouse and human alpha interferons, imiquimod induction which is characteristic of chicken and mammalian α interferons but not β interferon, polypeptide length and a putative NF-κB site in the promoter region of the chicken β interferon gene like its presumed mammalian counterparts. Several suggestions were made for additional information that would be helpful in the future to provide a firmer basis for the proposed nomenclature. These included a suggestion for a comparison of the folded structure of the chicken α and β interferons with their mammalian counterparts and a determination of whether the putative NF-κB site in the promoter region of the chicken β interferon gene was functional. The committee reiterated its conclusion of last year that the nomenclature for chicken α interferons should have provisional approval.

Duck Interferon. It was noted that the six cysteine residues of the putative duck α interferon match closely with respect to their position with comparable cysteine residues in the chicken α gene and four of the six cysteine residues in the duck sequence match the position of cysteine residues in the consensus mouse α interferon sequence. The duck α interferon is induced by imiquimod as are chicken and mammalian α interferons, a criteria that appears to distinguish them from β interferons. Although the duck genome appears to contain a number of α genes based on hybridization data obtained with the one gene cloned to date on genomic blots, the length of these other putative duck interferon genes is not know. Modeling of the cloned duck α interferon should be done and compared to the chicken α interferon. The committee concluded that the duck α interferon should be given provisional approval.

Turkey interferon. Structural information available for turkey α interferon was reviewed. It shares 82% amino acid sequence identity with the chicken α interferon and functions to induce an antiviral state on chicken cells. The committee concluded that the turkey α interferon should be given provisional approval.

For all of the avian α and β interferon sequences, the committee thought that more serology data, more structural studies and more gene sequence information, including regulatory regions, were needed in order for these sequences to be moved from the provisional category to actual status.

Tau Interferons. A paper on the classification of tau interferons has been published recently (Alexenko, A.P., Ealy, A.D., Bixby, J.A. and Roberts, R.M. *JICR* 20:817, 2000). Table 3 in the paper was newly added as it had not been available last year for consideration. The committee concluded that the tau nomenclature should be approved as provisional. More data such as genomic organization and segregation of alleles would be needed before this nomenclature could be considered for actual status.

Chemokines and Chemokine receptors. The committee was made aware of two papers published recently on the nomenclature for chemokines and chemokine receptors (Murphy, P.M. et.al., *Pharmacological Reviews* 52:145-176, 2000 and Zlotnik, A. and Yoshie, O. *Immunity* 12:121-127, 2000). The committee thought that the nomenclature was logical and based on protein structure and there was a good discussion on mouse-human relationships. The committee agreed that these articles should be brought to the attention of the ISICR membership and endorsed the use of the nomenclature that was presented.

Respectfully Submitted,
Margaret J. Sekellick
Erik Lundgren

Publications Committee

November 5, 2000

The Annual Meeting of the Publications Committee of the International Society for Interferon and Cytokine Research (ISICR) was called to order on Sunday, November 5, 2000 at 5:02 p.m. Members in attendance were Kurt Berg, Maria Capobianchi, Deborah Vestal, Pat Fitzgerald-Bocarsly, Dhan Kalvakolanu, Jerry Tilles, Bob Fleischmann, and Phil Marcus (ex officio). Members not in attendance were Sandra Pellegrini and Yoshihiro Sokawa.

Phil Marcus gave a report on the status of the Journal of Interferon and Cytokine Research (JICR). The following major items were included in his report.

There was a slight decrease in the number of pages published this year as compared to last year, though the decrease was not thought to be significant.

The impact factor of the journal continues to rise (from 1996 to 1999 it has risen from 1.28 to 1.47, to 1.74, to 2.17). This increase is heartening and is believed to reflect the dedication of the members of the ISICR to publishing their best papers in the journal. The number of publications in the journal by Editorial Board members could be improved.

The following changes have been made during the past year: Moshe Talpaz has been added to the Editorial Board, Nando Dianzani has replaced Hans Strander as a Section Editor, and Ganes Sen has replaced Peter Lengyel as a Section Editor. A

motion was passed expressing profound thanks to Hans and Peter for their years of dedicated service. A request was made for subjects for potential Special Topics Issues. Several possible topics were discussed for consideration, including the following: IFNs/Cytokines and Invasive Microorganisms; Use of Interferons in Hepatitis Treatments; and, Role of Interferon in Enhancing Viral infections. The terms of one-third of the Section Editors and one-third of the Editorial Board members of the JICR are due to expire this year. The Publications Committee addressed the mechanism to be used to replace/renominate Section Editors and Members of the Editorial Board. The essential criteria were identified as stature in the Interferon/Cytokine field; ability to review manuscripts promptly; quality of reviews; and, publication in the JICR. Nominations for Section Editors and for membership on the Editorial Board may be sent to Phil Marcus for consideration by the Publications Committee.

At the behest of Phil Marcus, the Publications Committee discussed the possibility of the JICR offering a "A Best Paper Award" on an annual basis. It was thought that such an award would help to attract outstanding manuscripts from authors. The Publications Committee approved the establishment of this award by a vote of 6-0. Additionally, Phil was asked to determine whether the Best Paper award could be extended to two awards to permit the awarding of a "A Best Clinical Paper Award" and "A Best Basic Science Paper Award". He will seek to do that. The effects of a potential union of ISICR and the International Cytokine Society on the JICR were discussed. By a vote of 6-0, the Publications Committee approved the following statement: "There is a historically important relationship between the ISICR and the JICR and we most strongly endorses the continued linkage of the JICR and whatever future society evolves."

The relatively high cost of publication of color prints in the JICR was discussed. Phil will discuss this issue with Mary Ann Liebert.
The meeting of the Publications Committee concluded at 6:40 p.m.

Respectfully submitted,
Bob Fleischmann, Chairperson
Publications Committee

Standards Committee

November 5, 2000

Attendees: Lawrence Blatt, Ron Bordens, Norman Finter, Marie Green, Wendy Jones, Hanna-Leena Kauppinen, Yoshimi Kawade, Masayoshi Kohase, Tony Meager, Aida Sterin-Prync, Huub Schellekens, Monica Tsang, Louis Westreich, and Sidney Grossberg (chairman).

Dr. Grossberg opened the meeting at 1400 hours and asked the attendees to introduce themselves and state their affiliations. The group included members of the International Cytokine Society. Tony Meager and Wendy Jones agreed to keep the Minutes of the meeting

1. Approval of Minutes

The minutes of the last meeting on 5 September 1999 in Paris, France were approved as distributed.

2. Report on the 6th WHO Informal Consultation on Standards for Cytokines, Growth factors, and Endocrinological Substances

A report on this meeting held 22 September 2000 at the FDA, Bethesda, MD, USA, was given by Ron Bordens, the IFPMA representative. The assigned responsibility of the Consultative Group has been widened to include biologics, such as growth factors and other endocrinological substances, currently being used or developed as therapeutic products. The Group discussed the expiration of several older reference standards and reagents as well as the need for future reference standards. NIBSC and FDA representatives reviewed several clinical studies and standard preparations.

All of the new interferon alpha and omega standard preparations cited in the Minutes of the ISICR Paris meeting have been established as International Standards (IS) by the WHO Expert Committee for Biological Standardization (ECBS). These are now available upon request from NIBSC. A full list of available WHO international standards and reference reagents for human cytokines is available.

The Group recommended the establishment of the following substances as International Standards, subject to revisions to submissions to the WHO ECBS: 4th International standard for follicle-stimulating hormone and urinary luteinizing hormone 98/704 for bioassay; 2nd International standard for somatotrophin; and Reference reagent for inhibin B; as well as the re-establishment of the international reference reagent 87/518 for insulin-like growth factor-1, for immunoassay. The Group proposed the discontinuation of five International Reference Materials: porcine calcitonin for bioassay, bovine thyrotrophin for bioassay, ovine prolactin for bioassay, porcine kininogenase, and protamine.

General issues addressed by the Group included the terminology of tissue-type plasminogen activator, especially the distinction between natural and recombinant products, and the stability of international standard preparation. It was recommended that data should be provided from stability studies for established international standards.

The Group surveyed the progress towards the development of new and

replacement standards. International collaborative studies for IL-11, HuIFN-β,
ciliary neurotrophic factor, neurotrophin-3, vascular endothelial growth factor, and keratinocyte growth factor were at various stages of study. The original study for evaluation of candidate international standards for IFN-β had stalled because of formulation and/or recovery problems in some of the newly prepared freeze-dried materials included in the study. However, some data were now available from that study (see below), and further candidate standards were being prepared based on new formulation methods; it was therefore suggested that NIBSC submit a summary progress report to the Group. It was proposed that reference reagents for stromal cell-derived factor-1, thrombopoietin, transforming growth factor-β3, IL-18, and tumor necrosis factor antagonists should be developed.

The Group discussed what to define as a therapeutic protein for purposes of establishing reference materials and the need for some form of stability protocol for international standard preparations. The immunogenicity of therapeutic proteins in patients was viewed as a persistent and possibly increasing problem for both efficacy and safety. Among the issues raised were the measurement of neutralizing activity by inhibition in a specified assay and the lack of standardization. Another matter discussed was appropriate standards for immunoassays, particularly for clinical diagnosis, and how they might relate to WHO or other reference standards. It was agreed that a conference, sponsored by WHO and possibly other interested organizations such as IFPMA, ISICR, NIBSC, and FDA, should address the immunologic issues involved.

3. HuIFN-β international collaborative study.

This study had been stalled due to concerns about the recovery and instability of new candidate IFN-β international standards. Some of the assay raw data from nine participant laboratories had been partially analyzed statistically by Dr Rose Gaines Das (NIBSC) and were summarized by Tony Meager (NIBSC) as follows.

These data comprised 77 antiviral assays (12 assay systems), 6 antiproliferative assays (2 assay systems) and 5 reporter gene assays (2 assay systems). For the majority of individual assays the log dose - logit transformed response lines did not deviate consistently and significantly from linearity and parallelism. However, there was a trend for preparations coded B, E and F, which are all non-glycosylated recombinant IFN-βs, to have larger (steeper) slopes than the other preparations in several different assays, including reporter gene assays and the antiviral A549 cell-based assays. In other assays, e.g. antiviral FL- and FS4-based assays, preparations B, E, F, and C (Gb23-902-531, 2nd WHO IS containing fibroblast-derived IFN-β) tended to have larger (steeper) slopes. Nevertheless, slope differences among the different preparations showed no overall consistency from assay to assay, and sometimes even within an assay. Therefore, no definite conclusions can yet be made as to whether preparations can be distinguished on this basis.

Two pairs of internal duplicates, preparations A and H (97/672, purified fibroblast-derived IFN-β) and D and G (95/786, CHO cell-derived recombinant IFN-β), were included in all assays to assess the intra-assay variability. Potency estimates for these duplicated preparations provided evidence of the overall accuracy of all estimates, in that the overall mean for the duplicate relative to the preparation (identical except for code) was in good agreement with the expected value of one for each of the duplicated pairs.

A comparison of the ratio of potency estimates from all assays for preparations D/G:A/H, using A/H as standard for D/G, yielded a geometric mean value of 1.86 with a geometric coefficient of variation (GCV) of 15%. This indicated that A/H would be suitable as a standard to which D/G could be accurately calibrated. In contrast, a comparison of the ratio of potency estimates for A/H:C, using C as standard for A/H, yielded a geometric mean value of 1.06 with a GCV of 45%. This indicated an approximate three-fold variation in potency estimates of A/H dependent on assay type, and suggested that C was less appropriate for standardization of purified IFN-β preparations. A similar result, geometric mean value =1.97, GCV =38%, was obtained for the ratio of the potency estimates for D/G:C, with C as standard for D/G. A possible explanation for such wide variation could be that impurities in C differentially modulate the activity of the IFN-β it contains, depending on the assay type.

Nevertheless, when potency estimates for C (Gb23-902-531, 2nd WHO IS containing fibroblast-derived IFN-β) were derived in relation to the in-house standards (IHS), there was reasonable overall agreement with a couple of exceptions. Although it remains unclear what IFN-β preparations were used for IHS in every case and whether they had been calibrated in the same type of assays as used for this study, the average potency value for C was 15,416 IU/ml (assigned potency =15,000IU) with a GCV of 30%, suggesting that the IHS had been well calibrated.
In addition, some stability studies had been conducted and analyzed at NIBSC. When freshly reconstituted study materials were transferred to unsiliconized or siliconized glass vials and held for less than 30 minutes before dilution for assay, the potencies of preparations B, C and F

were relatively unaffected by the difference in containers. B and F contained non-glycosylated recombinant IFN-β ser17 and C fibroblast-derived IFN-β; C and F preparations contained gelatin as well as human serum albumin (HSA). In contrast, potency differences were observed for E, A/H and D/G. Potencies were higher in siliconized glass by 1.6x, 1.4x and 1.2x for E, A/H and D/G, respectively, indicating significant adsorption of IFN-β from these preparations in non-siliconized glass vials. All of these preparations contained highly purified IFN-β, but none of these preparations contained gelatin.

Limited data were also available for preparations stored at 4C or frozen at -70C before assay. Reconstituted preparations stored at 4C for 1 week showed no apparent change in potency, except that preparation E lost some activity. However, preparations stored in the same way for 2 weeks showed an apparent loss of 50 -70% of activity, with the greatest loss for E and A/H. Although a variable loss of activity among all preparations was apparent in one set of assays done at NIBSC, the effect of storage at -70C and thawing conditions was less clear since another laboratory did not find similar results.

These stability data, together with other un-analyzed NIBSC laboratory data, have strongly indicated that preparations A/H (97/672), D/G (95/786) and E (Gxb01-901-535 which had previously been rejected as a standard for other reasons) are unsuitable as candidate international standards. Additional new, differently formulated, candidate international standards are to be prepared by NIBSC in December 2000 and January 2001 for evaluation by international collaborative study in 2001-2002.

4. Revision of WHO recommendations for reporting interferon neutralizing antibody results.

a. Calculation of the index of neutralization.

b. The ten-fold reduction unit (TRU) as the index of the quantity of neutralizing antibody.

The problem surrounding the reporting of neutralizing antibody titres was addressed. Professor Grossberg led the discussion and introduced the method of calculating IFN neutralizing antibody results based on a formula originally derived by Professor Kawade. The basis for the proposed modification to the formula was contained in unpublished studies, presented in drafts of two manuscripts by Professor Grossberg, Professor Kawade and colleagues, on a panel of sera containing IFN neutralizing antibodies, including human sera to IFN-α and -β previously established as WHO International Reference Reagents.

The proposed calculation of the index of neutralization utilizes the formula $t_{1/10} = f(n-1)/9$, where $t_{1/10}$ is the antibody titer reducing 10 Laboratory Units (LU)/ml of IFN to 1 LU/ml, f is the reciprocal of the antibody dilution achieving the assay endpoint, and n is the IFN concentration measured in that day's titration. It was proposed that the observed reduction of IFN activity from 10 LU/ml to 1 LU/ml could be reported as a *Unit* of neutralizing activity, for which the name proposed is the Ten-fold Reduction Unit (TRU). Data from the unpublished studies supported the proposal to adopt the TRU as an alternative means of expressing neutralizing activity.

Comments were made that this method of calculating the titer of IFN neutralizing antibodies could be advantageous over the existing multiplicity of methods that have been reported in the literature. There was considerable discussion about the implications and applicability of the formula and the use of the proposed unit. However, because Committee members had not reviewed the findings of the unpublished studies, it was agreed to defer reaching a decision on recommending the method to the next WHO Consultation until Committee members had read the manuscripts. Professors Grossberg and Kawade agreed to circulate preprints of the study papers to the Committee for their further consideration.

5. Nomenclature of chemokines and chemokine receptors

Kathy Zoon had requested that our Committee and the ISICR Nomenclature Committee review two papers describing such a system of nomenclature. It was agreed that members of this Committee shared insufficient experience to consider this matter and that we should defer to the ISICR Nomenclature Committee for their expert recommendation.

There being no further business, the Meeting was adjourned at 16:30 hours.

Respectfully submitted,
Tony Meager
Wendy Jones
Sidney Grossberg

Don't compromise yourself. You are all you've got. --Janis Joplin

Faith that the thing can be done is essential to any great achievement.
-- Thomas N. Carruther

EMPTY SPACE FOR IMPORTANT REMINDERS

(Remind yourself to send the Editors food or money for putting together such an exciting newsletter)

Dear Colleagues and Friends,

I am very pleased to invite you to come to Cleveland for the Annual Meeting of the International Society for Interferon and Cytokine Research (ISICR), which will be held October 7-11, 2001.

We are all privileged to work in a dynamic and exciting area of basic research which is becoming increasingly important in the clinic. The wonderful complexities and interrelationships of the signaling pathways that respond to the interferons and other cytokines continue to unroll before our eyes and do not cease to amaze us. The 2001 Meeting has been organized to juxtapose in integrated sessions the most recent advances in basic science with clinical applications. A majority of the presentations will be selected from the submitted abstracts.

Many of you are probably not familiar with Cleveland. Let me assure you that you will visit a beautiful city, rated as one of the most attractive places to live in the U.S. Early October is usually pleasant here, with plenty of fall color. Situated on the south shore of Lake Erie, Cleveland offers visitors one of the best art museums in the U.S., excellent theatre and many other attractions. The venue for the ISICR meeting is the newly refurbished Sheraton Hotel, conveniently situated downtown, and the conference dinner will be in the Rock and Roll Hall of Fame and Museum, with its interactive exhibits fully accessible to all. If you haven't yet seen Janis Joplin's jalopy, this is your chance! Many of the local organizers for this meeting, including myself, work in the Lerner Research Institute of the Cleveland Clinic, and we are delighted to host a reception for all attendees in our new research facility on Monday, October 8. Tours will be available.

I hope that you will join us to continue the long tradition of exciting science and medicine that has characterized the ISICR annual meetings, leavened by rewarding cultural experiences.

Sincerely,
George R. Stark
Chairman of the Local Organizing Committee

VENUE:
Sheraton Cleveland City Centre Hotel
777 St. Clair Avenue
Cleveland, Ohio 44114, USA
Phone: 216-771-7600
Fax: 216-771-5129

Exciting and sophisticated, the Sheraton Cleveland City Centre Hotel is located in the heart of downtown Cleveland--very close to the world-renowned Rock and Roll Hall of Fame and Museum and the Great Lakes Science Center. You'll find delightful shopping right outside Sheraton's doors in the Galleria at Erieview, as well as nearby at The Avenue at Tower City. All within a few blocks of the hotel you'll find Cleveland's famed Flats, the Warehouse District and the Theater District offering diverse downtown nightlife and entertainment options. At the Sheraton you'll enjoy the best that this sophisticated and exciting city offers, and the hospitality of our elegant, yet friendly hotel.

MEETING SECRETARIAT:
ADPRO/Meeting Coordinators, Inc.
4400 Renaissance Parkway
Cleveland, OH 44128, USA
Phone: 216-646-2055
Fax: 216-464-3884
Inquiries: Ask for Jane Bacha
E-mail: jbacha@adpro.net

Internet Website:
www.isicr2001.org
Visit our website for regularly updated information regarding the meeting and its program. On-line Registration and Abstract submission is available. Links to exciting Cleveland sites and major corporate sponsors of ISICR 2001 are included.

Important Deadlines:

May 18, 2001	Abstract submission
May 18, 2001	Award application
May 18, 2001	Early registration with payment
June 29, 2001	Notification of acceptance of papers
August 15, 2001	Hotel reservation

Letter of invitation: The Organizing Committee will issue a letter of invitation for those who need help with necessary procedures for attendance. No financial

commitment is implied in a letter of invitation.

Sponsors

Aeterna Laboratories Inc. , Affymetrix, Amarillo Biosciences, Biogen , Chugai Pharmaceuticals, Cleveland Clinic Foundation Taussig Cancer Center, Continental Airlines, Immunex, Novartis, Schering AG, Serono Foundation for the Advancement of Medical Sciences