

ISICR OFFICERS

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July 2000
Volume 7, No.2

2000 Meeting

**November 5-9
Amsterdam**

<http://www.fbu.uu.nl/meeting2000/index.html>

Future ISICR Meetings

2001 Cleveland, OH

2002 Torino, Italy

Joint ISICR/ICS

2003 Melbourne

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www.ISICR.org

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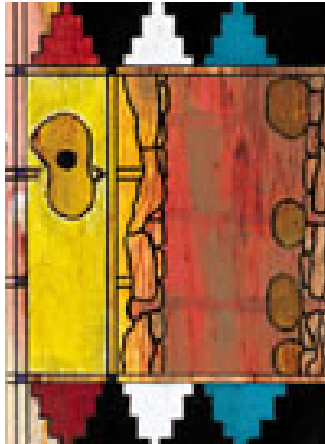
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Third Joint Meeting of the ISICR /ICS

Nov. 5-9,2000

RAI Amsterdam

The Netherlands

<http://www.fbu.uu.nl/meeting2000/>

The ISICR and ICS will hold their joint meeting in Amsterdam, November 5 to November 9 at the Amsterdam RAI International Exhibition and Congress Centre. This meeting is widely recognized as the foremost International Congress on cytokine research, creating an outstanding forum for the exchange of ideas and new information. The programme will be underpinned by plenary lectures on topics of wide interest given by outstanding scientists highlighting new developments of the past two to three years. In addition to keynote lectures and symposia, papers will be selected from submitted abstracts for oral and poster presentations. Amsterdam with world-famous canals and ancient buildings, is a superb conference venue with fine shops, unique art galleries and a bustling night-life. The programme will give ample opportunities to visit the historical city of Amsterdam with its

numerous typical 17th century canal houses retaining most of their period architecture, furnishings and paintings.

The science programme will include plenary lectures, workshops and poster sessions. Workshops are held in conjunction with poster exhibits. Conferees will participate and have the opportunity to discuss their talks and/or posters.

Symposia and workshops will take place simultaneously in the morning and afternoon. The final list of workshops will be established according to the topics covered by the abstracts.

Session topics include:

- Toll-like receptors and the response of the host
- Cytokines and autoimmunity
- Cytokine-binding proteins
- Cytokines in mucosal immunity
- Defects of the IL-12 and IFN-gamma pathway
- Angiogenesis
- Cytokines in organ transplantation
- Suppressor of cytokine signalling (SOCS)
- Adhesion molecules and cytokines
- Cytokines in neurological disease
- Chemokines, HIV and vaccine
- Cytokines and hematological tumors
- Cytokines in asthma and allergy
- The renaissance of IFN-beta

IMPORTANT DATES

August 31, 2000

Deadline for early registration

October 31, 2000

Deadline for advance meeting registration

After this date registration must be made at the meeting.

Registration Fees

| | Early* | Advance* | At the meeting |
|---------------|----------|----------|----------------|
| Members | 400 Euro | 500 Euro | 600 Euro |
| Non Members | 500 Euro | 600 Euro | 700 Euro |
| Students*** | 300 Euro | 350 Euro | 400 Euro |
| Guests/spouse | 250 Euro | 275 Euro | 300 Euro |

* Not later than August 31, 2000

** After September 1 and before November 1, 2000

*** Students must provide a document of university registration

The above fees include V.A.T. of 17.5 %.

Hosts

International Society for Interferon and Cytokine Research

President : Kathryn Zoon

President-Elect Keiko Ozato

Secretary : Sidney Pestka

Treasurer : Sam Baron

International Cytokine Society

President : Scott Durum

Vice President : Jean-Michel Dayer

Secretary : Carl Ware

Treasurer : Matthew Fenton

Local Organising Committee

Chair: Huub Schellekens, Utrecht University

Members:

Lucien Aarden, CLB, Amsterdam

Wim Buurman, Maastricht University

Sander van Deventer, Academical Medical Centre, Amsterdam

Jos van der Meer, University Hospital, Nijmegen

Peter van der Meide, Utrecht University

Susanne Osanto, University Hospital, Leiden

Willem Weimar, University Hospital, Rotterdam

**Support the
ISICR!
Renew Your
Membership
Now!**

Famous Proverb

Seize opportunity by the beard,
for it is bald behind

--Bulgaria

New ISICR Members

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

Georges M. Bahr
Lilli, FRANCE
Theolis Costa Barbosa
Bahia, Brazil
Gary Alan Brewer
Piscataway, NJ
Tovil Chafue
Elalia, Algeria
Moitreyee Chatterjee-
Kishore
Cleveland, OH
Bishnu P De
Cleveland, OH
Sanjay Victor D'Souza
Maywood, IL
Abdel Rahman El-
Zayadi
Cairo, Egypt
Kristen A. Foster
New Brunswick, NJ
Tracy Garrison
New Brunswick, NJ
Peter Harle
Oklahoma City, OK
Brian T. Hummer
Baltimore, MD
Lena Maria Christina
Jansson
Stockholm, Sweden
Carianne Schaffer
Judge
Baltimore, MD
Jiyoun Kim
Ann Arbor, MI

Xiaoling Li
Baltimore, MD
Runging Lu
Baltimore, MD
Evgenia Makarova
Moscow, Russia
Dolly Phillipova
New Brunswick, NJ
Melvin Rothberg
Ft. Lauderdale, FL
Gideon Schreiber
Rehovot, Israel
Osaima El-Sayed Selim
Cairo, Egypt
James Siverly
New Brunswick, NJ
Michael Skawinski
New Brunswick, NJ
Nan Zhong
Upton, NY

Request for Nominations to the JICR Editorial Board

In accord with the By-Laws of the ISICR, the Journal of Interferon and Cytokine Research will turn over a significant number of Editorial Board members starting in the year 2001. Nominations are hereby solicited for Editorial Board membership. Self-nomination is permitted if accompanied by a curriculum vitae. Members should be recognized leaders in the field, contributors to the JICR, skilled in the review process, and able to return reviews in a timely manner. When deemed

appropriate, requests will be made for a curriculum vitae.

This is an excellent opportunity to recommend colleagues whom you feel have not achieved the recognition they deserve for their research on interferons/cytokines. I look forward to hearing from you.

Editorial Board members receive a gratis subscription to the JICR, take part in the luncheon Editorial Board meeting and deliberations at the annual meeting of the Society, and are in a position to insure the quality of the articles that appear in the Journal. Please send your nominations to:

Dr. Philip I. Marcus
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Students and Fellows Science of the Future

Women Issues - Part I.

Hi! Hope that everyone is enjoying summer...

In the next two issues I'd like to explore the issue of women in science; well, actually, women in interferon and cytokine research. I personally

have not had to deal with any gender-related issues throughout graduate school and my postdoctoral experience so far. That is, I did not have to experience or observe a situation where male grad students/postdocs had a considerable advantage over women grad students/postdocs. Is this the status quo or was I lucky? Or do I have yet to experience "women issues" later on if I am so lucky to have the opportunity to apply for a faculty position or one of the higher scientific positions in industry? When I did a little research on the Web, I found that in most cases gender issues were largely addressed in the physical sciences/engineering fields; not much was discussed with regard to women in biology. I think that definitely much progress has been made with regard to how women perform and are considered in any field. With regard to our Society, we have two outstanding women scientists to lead us over the next four years (Dr. Kathryn Zoon as President; Dr. Keiko Ozato as President-Elect). The Society also annually awards The Christina Fleishmann Memorial Award to Young Women Investigators. At the San Diego ISICR meeting three years ago, I discovered that there were women researchers in our field who care about issues that women scientists may face on a daily basis. That being said,

from my side of town I think everything is fine and dandy for us girls. Am I right to think that or am I hopelessly blind of reality?

I thought that for starters, we could get an idea of what you - grad students and postdocs (principal investigators are also most certainly welcome to participate) - think with regard to whether or not there are gender differences in the interferon/cytokine field. Please take a few minutes to answer the following survey by e-mail or by fax - you don't have to identify yourself if you don't want to. And not only the gals - input from the guys would be great too! In the next issue, we will hear from various female scientists who have been in the field for a while who will hopefully provide what the actual situation is; and we will compare their stories with the results of the survey.

1. Please state your sex: (M/F)
2. Do you think that the interferon/cytokine field is male-dominated? (Y/N)
3. Do you think that the interferon/cytokine field reflects the general state of biomedical research? (Y/N). If No, how is it different?
4. Do you think that "women issues" in our field is a crucial issue, or is it overrated? (crucial/overrated)
5. Do you think that there are

gender differences in the interferon/cytokine field with regard to:

a) availability of academic faculty and/or higher industrial positions (Y/N)

b) salaries (Y/N)

c) ability to publish scientific papers (Y/N)

6. Do you think that any gender differences observed are due to the way women may think/act - for example, feeling inferior to men in terms of the ability to succeed, higher priority to family versus career? (Y/N) and/or

7. Do you think that any gender differences observed are due to "barriers" in the workplace for women compared to men? For example – are higher positions/salaries still awarded preferentially to men, regardless of qualification? (Y/N)

8. Additional comments:

Thank-you!

Hannah

REVIEWS OF INTEREST

Diehl AM. Cytokine regulation of liver injury and repair. *Immunological Rev.* 174:160, 2000.

Golab J. Interleukin 18 – Interferon γ inducing factor – A novel player in tumour

immunotherapy? *Cytokine* 12:332, 2000.

Hatada EN, Krappmann D, Scheidereit C. NF- κ B and the innate immune response. *Curr. Opin. in Immunol.* 12:52, 2000.

Massague J, Chen YG. Controlling TGF- β signaling. *Genes & Development* 14:627, 2000.

Morgensen KE, Lewerenz M, Reboul J, Lutfalla G, Uze' G. The type I interferon receptor: Structure, function and evolution of a family business. *J. Interferon and Cytokine Res.* 19:1069, 1999.

Paludan SR. Synergistic action of pro-inflammatory agents: cellular and molecular aspects. *J. of Leukocyte Biol.* 67:18, 2000.

Rath PC, Aggarwal BB. TNF-induced signaling in apoptosis. *J. of Clin. Immunol.* 19:350, 1999.

Reed JC. Caspases and cytokines: Roles in inflammation and autoimmunity. *Advances in Immunology* 73:265, 1999.

Schwarz MK, Wells T NC. Recent developments in modulating chemokine networks. *Exp. Opin. Ther. Patents* 9:1471, 1999.

Takeda K, Akira S. STAT family of transcription factors in cytokine-mediated

biological responses. *Cytokine & Growth Factor Rev.* 11:199, 2000.

Tau G, Rothman P. Biologic functions of the IFN- γ receptors. *Allergy* 54:1233, 1999.

Ward AC, Touw I, Yoshimura A. The Jak-Stat pathway in normal and perturbed hematopoiesis. *Blood* 95:19, 2000.

Yoshikai Y, Nishimura H. The role of interleukin 15 in mounting an immune response against microbial infections. *Microbes & Infection* 2 381, 2000.

Zlotnik A, Yoshie O. Chemokines: A new classification system and their role in immunity. *Immunity* 12:121, 2000.

WWW

BBID-Biological Biochemical Image Database

<http://bbid.grc.nia.nih.gov/>
Complex biological regulatory pathways are becoming increasingly Important in the study of biological phenomena and human disease. To begin to deal with the complexity of biological systems, we have begun a WWW searchable database of biological pathways from higher

eukaryotes. If you are interested in this problem. Please take a look at our page. If you find it interesting, we would be interested in the following simple feedback:

1. Does it make sense, is it useful?
2. Is it intuitively obvious, or do you find it confusing? Are there any errors?
3. Can you recommend anything to make it better (other than more images)?
4. Can it be matched to other databases or approaches to make it more useful?

If you are particularly into this, and would like to participate in some way, we would love to work with interested people with creative ideas. We hope to build it in greater depth over the next few years.

Kevin Becker
DNA Array Unit
NIA/NIH
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Bioinformatics

<http://post.queensu.ca/~forsdyke/bioinfor.htm>

A bioinformatics web-page with links to other bioinformatic sources is now open.

Bioprotocol

<http://www.bioprotocol.com>

A new company, BioProtocol, has collected, edited, formatted and posted a large database of protocols on the Internet. These protocols are freely available to anyone wishing to access the website.

Gene Expression Markup Language

<http://www.rii.com/geml>

The Gene Expression Markup Language (GEML) is a file format for storing DNA microarray and gene expression data. GEML is an open-standard XML format which enables exchange of data between gene expression databases and analysis systems. GEML stores which data collection methodology was used, without making assumptions about the meaning of a measurement. This enables possible normalization, integration, and comparison of data across methodologies. GEML handles expression profile data and allows scan images and chip layouts (or "patterns") to be easily referenced and tracked. GEML is independent of any particular database schema.

Related links:

Rosetta GEMLPattern DTD - <http://www.rii.com/geml/GEMLPattern.dtd>
Rosetta GEMLProfile DTD - <http://www.rii.com/geml/GEMLProfile.dtd>
Rosetta Inpharmatics Home Page - <http://www.rii.com>
Rosetta Response to the OMG Gene Expression RFP - <http://www.omg.org/cgi-bin/doc?lifesci/99-08-11>

Famous Quote

Trust your hunches. They're usually based on facts filed away just below the conscious level.
--Dr. Joyce Brothers

GENAMICS JOURNALSEEK

<http://genamics.com/journals/>

Genamics JournalSeek is a fully searchable database of journal information. JournalSeek now contains over 8500 journal titles. Information includes abbreviated titles, aims and scope, publisher, link to online site, availability of abstracts/full-text online, ISSNs, and journal impact factors. All information is freely provided.

Marcel Dinge,
<http://genamics.com>

Genomes OnLine Database

<http://igweb.integratedgenomics.com/GOLD/>

After three years of continuous updating at the University of Illinois at Urbana-Champaign GOLD (Genomes OnLine Database) has moved to a new home at Integrated Genomics. GOLD currently has information for 234 genome projects and has query capabilities.

Nikos Kyrpides
<http://www.integratedgenomics.com>

HGBASE

<http://hgbase.cgr.ki.se/>

The human gene-based polymorphism database, called HGBASE (Human Genic Bi-Allelic SEquences) is FULLY ACADEMIC and hosted at a

NEW WEB SITE in the Karolinska Institute, Sweden. HGBASE is now the product of a European consortium involving the Karolinska Institute (Sweden), the European Bioinformatics Institute (UK), and the European Molecular Biology Laboratory (Germany), with support from Interactiva GmbH (Germany).

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InterPro

<http://www.ebi.ac.uk/interpro>
<ftp://ftp.ebi.ac.uk/pub/databases/interpro/>

InterPro is an Integrated Resource of Protein Domains and Functional Sites. InterPro rationalises the complementary efforts of the PROSITE, PRINTS, Pfam and ProDom database projects. Each combined InterPro entry includes functional descriptions and literature references, and links are made back to the relevant member database(s), allowing users to see at a glance whether a particular family or domain has associated patterns, profiles, fingerprints, etc. Merged and individual entries (i.e., those that have no counterpart in the companion resources) are assigned unique accession numbers. Each InterPro entry lists all the

matches against SWISS-PROT and TrEMBL InterPro release 1.0 contains 2990 entries, representing 556 domains, 2373 families, 47 repeats, and 14 post-translational modification sites. Overall, there are 823000 InterPro hits from 307361 SWISS-PROT + TrEMBL protein sequences. A complete list is available from the ftp site.

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Things to Think About

Is it possible to be totally partial?

Why is the word abbreviation so long?

Ongoing Biology

<http://www.tilgher.it/ongoing.html>

A new free news service for biologists is now available. The service gives biologists the opportunity of communicating their theoretical or experimental research to the international community. Send now a brief (15-30 lines) communication in which your latest (current) research is described. Please include a short title and your name, institution and email for correspondence about your communication. Communications should be sent to:
silvano.traverso@tilgher.it

The service is sponsored by Rivista di Biologia / Biology Forum, the international biology journal founded in 1919.

Silvano Traverso
Managing Editor
Rivista di Biologia / Biology Forum
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PIR PROTEIN SEQUENCE DATABASE

<http://pir.georgetown.edu/>

RELEASE 64.00 OF THE PIR-PSD

- Contains 178,050 entries and is available by ftp at:
<ftp://nbrfa.georgetown.edu/pir>
and
<ftp://nbrf.georgetown.edu/pir>

PIR-PSD entries on the web site have complete links to:

- KEGG, BRENDA, and metabolic pathways and enzyme databases
 - The Protein Databank of Protein Structures (PDB)
 - Clusters of Orthologous Groups (COGs) at NCBI
- NEW PROTEIN SEARCH AND ANALYSIS TOOLS ON THE WEB INCLUDE:**
(see Bioinformatics 16, 2000)

1. Domain Search
Searches for sequence similarity with domains annotated by PIR-International. The results are presented in a table and graphical bars format.

2. Global and Domain Search

Simultaneously searches the PIR-PSD and the PIR Domain Databases. Results are presented in table and graphical format.

3. Integrated Environment for Sequence Analysis (IESA)

This program provides an integrated environment for protein sequence analysis using all the tools on the Web Site. You can:

- Browse PIR-International Protein Sequence Database.
- Display database statistics in graph and table format.
- Display annotations in a table format.
- Find Links to PDB, COG, KEGG, BRENDA, WIT and PIR-ASDB.
- Search text fields.
- Search specialized genomes, e.g. Homo sapiens, Mus musculus, S. cerevisiae and E. coli.
- Use the integrated sequence analysis tool including:
 - BLAST and FASTA searches,
 - Pattern Matching,
 - Domain Search
 - Global and Domain Search
 - Multiple alignments with feature display.
 - Annotation Similarity Search

NEW PROTEIN DATABASE AVAILABLE:

The PIR Annotation And Similarity Database (PIR-ASDB): This is a precompiled database of FASTA scores and alignments for the entire PIR-International Protein Sequence Database and includes both annotation and classification

information. The database is accessible directly, or from within the PIR Integrated Environment for Sequence Analysis (IESA).

Protein Database ISL

http://stash.mrc-lmb.cam.ac.uk/PDB_ISL/

PDB_ISL (intermediate sequence search) is a sensitive and fast search procedure. It is useful for finding sequences that are in the PDB protein structure database and are homologous to a sequence of unknown structure.

The server utilizes the intermediate sequences which have been collected from a larger sequence database. These sequences have been found from searches of the domains in the SCOP database (version 1.38) against NRDB using PSI-BLAST.

Radiation Hybrid Database

<ftp://ftp.ebi.ac.uk/pub/databases/RHdb>

This database, maintained at the European Bioinformatics Institute since 1995, contains raw radiation hybrid results, extensive cross-references as well as maps. Release 17 has data on 117639 assays (91376 different STSs) from 15 panels and 5 species using 182 experimental conditions. A total of 91 maps is available.

Full SRS access to the latest release is now available. For more information, see <http://www.ebi.ac.uk/RHdb>.

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Fax: +44 (0)1223494468

CLINICAL TRIALS

Trials at the National Institutes of Health, Bethesda, MD
Contact: Patient Recruitment and Public Liaison Office, CC, Bethesda, MD 20892-4754
TEL: 1-800-411-1222

94-I-0203 Peripheral Blood T Cell **Cytokine** Production in Asthmatics

95-C-0054: Phase I Study of T-Cell Large Granular Lymphocytic Leukemia Using the MIK-Beta-1 Monoclonal Antibody Directed Toward the **IL-2R-Beta Subunit**

00-C-0121: A Phase I Investigation of **IL-12/Pulse IL-2** in Adults with Advanced Solid Tumors

96-C-0113: A Pilot/Dose-Finding Study of the Toxicity, Anti-Kaposi's Sarcoma (KS) Activity, and Immunologic Activity of **Interleukin-12** Administered to Patients with AIDS-Associated KS

97-C-0040: EPOCH
Chemotherapy +/- **IL-12** for
Previously Untreated and
EPOCH Plus Rituximub for
Previously Treated Patients
with AIDS-Associated
Lymphoma

98-DK-0003: Combination of
Alpha Interferon with Long
Term Ribavirin Therapy for
Patients with Chronic Hepatitis
C

99-C-0145: A Two -Stage
Randomized Phase II Trial of
Isolated Limb Perfusion (ILP)
with Melphalan with or
without **Tumor Necrosis
Factor** for Patients with High-
Grade Unresectable Extremity
Sarcoma

ID Numbers 199/11559;
SVMC-ONC-222P; NCI-V96-
0886 Vaccine Therapy,
Chemotherapy, and **GM-CSF**
in Treating Patients With
Advanced Pancreatic Cancer
St. Vincent Medical Center -
Los Angeles, Los Angeles, CA
Contact: Charles L. Wiseman
213-484-7575

ID Numbers 199/12652;
LAC-USC-01951; NCI-G97-
1264 Inhaled **Interleukin-2** in
Treating Patients With
Metastatic or Unresectable
Cancer USC/Norris
Comprehensive Cancer
Center, Los Angeles CA.
Contact: Raymond A. Kempf
323-226-4009

ID Numbers 199/13889; E-
1497 **Interleukin-2**
Immunotoxin Therapy in

Treating Patients With
Indolent Stage II, Stage III, or
Stage IV Non-Hodgkin's
Lymphoma. Eastern
Cooperative Oncology Group
Contact: Timothy M. Kuzel,
Study Chair, 312-908-5284

ID Numbers 199/14592;
FHCRC-1365.00; NCI-G99-
1622 **Interleukin-11** Plus
Filgrastim Prior to Peripheral
Stem Cell Transplantation in
Patients With Non-Hodgkin's
Lymphoma, Hodgkin's
Disease, Breast Cancer, or
Other Solid Tumors
Fred Hutchinson Cancer
Research Center, Seattle, WA.
Contact: Leona Holmberg
206-667-6447

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.
Contact: Charles L. Shapiro
614-293-7530

ID Numbers 199/13284;
MUSC-FDR000768 Phase III
Randomized Study of
Interferon Gamma in
Children With Severe,
Congenital Osteopetrosis
Medical University of South
Carolina, Charleston, SC.
Contact: L. Lyndon Key, Jr.
803-792-6807

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 Contact: Ralph
S. Freedman 713-792-2764

We should not worry if students
don't know everything, but only if
they know everything badly.

Peter Kapitsa

**Students and
Postdoc ISICR
Membership
Dues
are only \$10**

ISICR WEB SITE MOVES TO NEW LOCATION

The ISICR web site has a new
location: www.isicr.org. Our
current webmaster, Menachem
Rubinstein, has agreed to
continue his efforts to keep our
website current and up to date.

ISICR members can list their
open postdocotoral positions
on the ISICR website

Thought to Ponder

If you yelled for 8 years, 7
months and 6 days, you will
have produced enough sound
energy to heat one cup of
coffee.

OBITUARY

Samuel Salzberg

The Israeli Chapter of ISICR regrets to inform the untimely death of Prof. Samuel Salzberg on Saturday, Apr. 15th 2000. Born in 1940, Samuel Salzberg received his Ph.D. at the Weizmann Institute of Science, Rehovot, Israel in 1970. During 1970-1973 he did his post-doctoral studies at the St. Louis University Medical School. In 1973 he joined the Department of Life Sciences in Bar-Ilan University, Ramat-Gan, Israel, where he stayed for the rest of his career. In 1986 Prof. Salzberg became the Head of the Department of Life Sciences and in 1998 he was appointed the Dean of the Faculty of Life Sciences at Bar-Ilan University. He was a Visiting Scientist at the National Institutes of Health, Bethesda, MD and at the Argonne National Laboratory, Argonne, IL. Prof. Salzberg was extensively engaged in studies on the antiretroviral effect of interferon, both in chronic and exogenously infected cells. Numerous basic findings on the subject were published. More recently he concentrated on the antiproliferative effects of IFN, and in the last few years he studied the involvement of PKR and 2-5A synthetase in cell growth and differentiation. During his career, Prof. Salzberg published 67 papers and supervised 25 students. He left a wife, three children and many friends who cherish his memory.

Menachem Rubinstein

THE SHORT GUIDE TO SPEEDWRITING SCIENTIFIC PAPERS

S.H. Hughes
NCI-FCRDC, Frederick, MD

1) The essential problem is to make a good first draft. In order to do this, you **must** have a complete plan of what you will write. No exceptions, no excuses, ever. Make a clear, complete outline (quit smirking— it does work: 20 minutes spent on a serious outline can save you hours). If you are writing a paper, you **must** have an absolutely clear picture of what the figures will be. It will be much easier if you have the final figures when you begin. Start with the results section, then write the introduction. The discussion is third; the materials and methods should be written last.

Aim the level of the paper at an intelligent colleague in an unrelated field. Imagine you are writing down what you would tell this colleague if he/she asked you to explain the experiments. Make it clear why you wanted to do the experiments and what you expected to learn. A reader will put up with a great deal, but only if he/she knows where you are trying to go with your explanations.

2) Be absolutely certain you get the order and connectivity of your ideas right the first time (see comment 1). Nothing is harder (or more time-consuming) than

reordering jumbled ideas, particularly your own. If you have any doubt about where something should go, make some annotation about it on the side and go on. It is much easier to flesh out than to pare down. Keep it spare and simple. If an idea has been left out, you can always add a sentence or a paragraph in the right place on the second or third draft.

3) Hemingway is an excellent role model for a science writer. Faulkner is not. If you have any doubts about this basic principle, consult Strunk and White (*The Elements of Style*, MacMillan Publishing Co., New York). Consult Strunk and White anyway; you should be able to recognize that a book about good writing is worth reading if it is itself well written.

4) As you write, read aloud what you write. Eventually you should be able to hear the rhythms of the written word. What makes Lincoln's writing so marvelous to read is that it so fully captures appropriate rhythms. **Anything** you write that sounds the least bit discordant to you, rewrite. You can be certain that it will sound awful to everyone else. If in doubt, recast the sentence or paragraph.

5) If you are efficient, you can write the paper in three drafts. The first should be about 70% correct, the second should be 90-95% correct, and anything afterward should be, at most,

small changes for clarity. You should be able to give someone else the third draft and have them pick up the minor errors (and only minor errors).

6) Try not to leave a big writing project until the last minute. A day or two between drafts is much better than an immediate attempt at rewriting. A week is better still. You know what you wanted to say, so when you read it yourself, it reads the way you think it should. In a few days, this bias fades and, as a result, grasping the errors in your manuscript is much easier. Try always to read your writing objectively. Read what you said, not what you hoped to say. Reading your writing aloud is a means to this end (see comment 4). If you have the strength, carry on several writing projects simultaneously. This is much more efficient than trying to work on several writing projects sequentially. Be careful—there is a hidden trap here. A writing project can expand to fill as much time as you are willing to allow. Try to be disciplined about writing. Try to learn how long it will take you to write something if you really concentrate on the project, write diligently, and do not allow yourself to be distracted. Set aside an appropriate block of time to write—for example, a draft of the results section. Get your cup of coffee, go to the bathroom or whatever, and

then sit down and write. Finish the job. Then go get another cup of coffee. Force yourself to concentrate. No distractions and no goofing off.

7) For Goodness sakes, write something! Don't stare at the page and agonize. If you have a good outline, you should be able to write something reasonably quickly. Yes, I know I told you three drafts, but, in a pinch, four drafts are a lot better than no drafts. This is not an invitation to sloppy writing. Do the best job you possibly can on the first draft; just don't agonize over it.

8) Make a serious effort to avoid any sloppy usage in the first draft. Viruses cannot integrate into the host genome (Viral DNA....). Genes do encode proteins; however, genes never contain Asp, Glu, etc. Try to remain conscious of exactly what you are writing and separate your words from your intentions. An amazing amount of time can be spent expunging stupid little errors from what would otherwise be a nice manuscript. If you know you have a tendency to misuse a particular phrase or idea in descriptions, try to be conscious of your favorite error. It is much easier to put it down right the first time than it is to fix it later.

9) Ideally, your writing will reflect your thinking and, to a significant degree, your speaking. This can be both an advantage and a handicap.

The essential point is you should match your writing style to your speaking style. Don't force your writing, or try to force it. Adopt a style of writing you can be comfortable with. A common error is to attempt a writing style that is far more elaborate than the person's normal speaking style. Don't do it. When you write, be yourself. Who else is better qualified?

10) There is one last ray of hope. The more you write, the easier it gets. The apprenticeship is long. Pay close attention to what you admire in other people's writing. Try to understand what you do and do not like about what you have written, and about how you write.

FOOD OFFENSE RECIPIE

All American Chocolate Oatmeal Cookies

1 oz unsweetened chocolate
1 stick (8 tblsp.) unsalted butter (at room temp)
½ cup dark brown sugar
½ cup granulated sugar
1 tsp. vanilla extract
½ tsp. salt
1 egg
½ tsp. instant coffee powder
½ tsp. baking soda
1 cup rolled oats
¾ cup flour
1 cup (6 oz.) Nestle's semisweet morsels
½ cup shredded coconut
¼ cup dark raisins

½ cup walnuts, coarsely chopped

1. Preheat oven to 325 F (150 C). Line 4 baking sheets with aluminum foil and lightly butter the foil.
2. In the top of a double boiler, melt the unsweetened chocolate and let cool to RT.
3. In a large mixing bowl, cream the butter with the sugars, vanilla and salt. Add the cooled chocolate, egg, coffee powder, baking soda & mix well. Stir in the oats and flour then add the chocolate chips, coconut, raisins and walnuts.
4. Use 2 level tablespoons of dough for each cookie. Roll into a ball. Place 6 balls/sheet and bake about 14 minutes.
5. Cool on a wire rack.

These are so good right out of the oven that you'll probably eat at least 6 before they fully cool. Bring the rest into the lab.

Famous Quote

Can anything be sadder than work unfinished? Yes; work never begun.
--Christina Rossetti

Science Jokes Website

<http://www.xs4all.nl/~jcdverha/scijokes/>

The science jokes are collected by Joachim Verhagen

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Includes collection by Lars Olofsson (larso@cs.chalmers.se) of April 1994

Includes math jokes collection by Michael Cook

(mlc@iberia.cca.rockwell.com) of June 1994;

Includes collection by Chris Bradfield (ph2008@bris.ac.uk) of

October 1994; Includes collection by Richard D. LeBreton (S5100101@nickel.laurentian.ca) of Februari 1995; Includes collection by Philip Clarke (clar0318@flinders.edu.au) of 1998

From: Melany Chapint, NancyTorok
Here are some interesting interpretations of nature from test papers and essays submitted to science and health teachers by junior high, high school, and college students(!) around the world. Here are some school childrens interpretations of science & school found on the net:
(From *Popular Science* by way of an Ann Landers column)

- When you breath, you inspire. When you do not breath, you expire.
- H₂O is hot water, and CO₂ is cold water
- To collect fumes of sulphur, hold a deacon over a flame in a test tube.
- When you smell an odorless gas, it is probably carbon monoxide
- Water is composed of two gins, Oxygen and Hydrogin. Oxygen is pure gin. Hydrogin is gin and water.
- Three kinds of blood vessels are arteries, vanes and caterpillars.
- Blood flows down one leg and up the other.
- Respiration is composed of two acts, first inspiration, and then expektoration.
- The moon is a planet just like the earth, only it is even deader.
- Dew is formed on leaves when the sun shines down on them and makes them perspire.
- A super-saturated solution is one that holds more than it can hold.
- Mushrooms always grow in damp places and so they look like umbrellas.
- The body consists of three parts-- the brainium, the borax and the abominable cavity. The brainium contains the brain, the borax contains the heart and lungs, and the abominable cavity contains the bowels, of which there are five - a, e, i, o, and u.
- The pistol of a flower is its only protection against insects.
- The alimentary canal is located in the northern part of Indiana.
- The skeleton is what is left after the insides have been taken out and the outsides have been taken off. The purpose of the skeleton is something to hitch the meat to.
- A permanent set of teeth consists of eight canines, eight cuspid, two molars, and eight cuspidors.
- The tides are a fight between the Earth and moon. All water tends towards the moon, because there is no water in the moon, and nature abhors a vacuum. I forget where the sun joins in this fight.
- A fossil is an extinct animal. The older it is, the more extinct it is.
- Equator: A menagerie lion running around the Earth through Africa.
- Germinate: To become a naturalized German.
- Litter: A nest of young puppies.
- Magnet: Something you find crawling all over a dead cat.
- Momentum: What you give a person when they are going away.
- Planet: A body of Earth surrounded by sky.
- Rhubarb: A kind of celery gone bloodshot.
- Vacuum: A large, empty space where the pope lives.
- Before giving a blood transfusion, find out if the blood is affirmative or negative.
- To remove dust from the eye, pull the eye down over the nose.
- For a nosebleed: Put the nose much lower then the body until the heart stops.
- For drowning: Climb on top of the person and move up and down to make artifical perspiration.
- For dog bite: Put the dog away for several days. If he has not recovered, then kill it.
- For asphyxiation: Apply artifical respiration until the patient is dead.
- For head cold: Use an agonizer to spray the nose untill it drops in your throat.
- To keep milk from turning sour: Keep it in the cow.
- Nitrogen is not found in Ireland because it is not found in a free state.

