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BULLETIN

CANADIAN SOCIETY FOR IMMUNOLOGY

SOCIÉTÉ CANADIENNE D'IMMUNOLOGIE

June 1996

V. 27, No. 1

0068-9653

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This is the tenth anniversary of the awarding of the Cinader Lectureship, the premier award of the CSI/SCI. With the assistance of Arnold Froese (Univ. of Manitoba), we cite previous winners of this award and provide some background on this year's recipient, Peter Bretscher (University of Saskatchewan).

CANADIAN SOCIETY FOR IMMUNOLOGY CINADER LECTURERS

1987	B. Cinader	"Developmental Change in the Second Half of Life - Challenge and Opportunity"
1988	Alec Sehon	"Tolerogenic Derivatives of Biologically Active Antigens for Therapeutic Intervention"
1989	Rick Miller	"T-cell Differentiation"
1990	John Roder	"The Ghost of Metchnikov"
1991	Emil Skamene	"Experiments of Nature and Natural Resistance"
1992	John Bienenstock	"From There to Here"
1993	Tim Mosmann	"T-cells and Cytokines: Why Does the Immune System Have to be so Complex"
1994	Tak Mak	"And Appear to be and Appear not to be"
1995	Dennis Osmond	"A B-cell Biography: The Soil and the Seed"
1996	Peter Bretscher	"Regulation of the Immune Response: The Significance of Quantitative and Qualitative Signals as Physiological Signs"

Abbreviated Biography of this Year's Winner:

Peter Bretscher was born in Cambridge England. He obtained a BA in Physics from Cambridge University in 1964 and completed his PhD in Molecular Biology at the same University where his mentor was Nobel Laureate, Sir John Kendrew. Peter did a PDF at the Salk Institute with Mel Cohn where they wrote the now classic Nature paper on the two hit theory of lymphocyte activation. Peter's early theories have stood the test of time, influencing many people, and are now being applied to many immunological problems including AIDS and vaccine development.

Science Policy Report

Tim Lee and Bruce Elliott

This report will bring you up to date on the ongoing work that we have been doing on behalf of the CSI with respect to science policy. There are two sections to the report. The first outlines the results of a meeting between Tim Lee and the Minister of Defence the Hon. David Collenette. The second section deals with the plans being developed by us to lobby the government for more funding to be directed to discovery based research at the universities and hospitals.

1. Meeting with David Collenette:

This meeting was set up in an effort to explain to someone on the Federal Cabinet the problems and issues regarding science policy in Canada, particularly how it is affecting CSI members. The Minister of Defence was chosen since Tim knows him personally. In preparation for this meeting Bruce and Tim discussed the important issues to be brought forward and the amount of information which could reasonably be put forward in a short period of time. Clement Gauthier and Howard Dickson of the Coalition for Biomedical and Health Research were approached for their input and both provided very useful guidance. Paul Hough was consulted on a regular basis for his ideas and input into the presentation to be made to the Minister. All of these people provided a slightly different perspective on the issues and on particular approaches to be used. Both Clement and Paul were extremely helpful and gave very sage advice.

The points brought out at the meeting reflected the various agendas of all concerned but particularly the CSI agenda and, of course, Tim's agenda as a university based basic scientist. There were three basic messages which we tried to get across to the Minister. The first was that if the government is counting on a knowledge based economy to take Canada into the next century it should invest more heavily in basic scientific research. At the very least the government should follow the recommendations of its own finance committee and not cut back funding to the granting councils. We tried to get a very strong message across that research creates jobs! This may be a very opportune time to present that message. The second was that the cut-backs to transfer payments for post-secondary education are having a crippling effect on both our ability to engage in biomedical research and to train the next generation of biomedical scientists. The third was to engage the Minister in a dialogue as to how the government can transfer a large percentage of the funds it now spends on internal, non-accountable, research to the broader scientific community where the research endeavors would be accountable and, preferably, peer reviewed.

The Minister responded well to all these points. We were advised that the meeting would probably be about 20 min but we were allowed nearly one and a half hours. The Minister was frank and open and exhibited a considerable amount of knowledge about science in

the country. He asked a number of questions, however, which showed that the government still lacks some important information about the state of biomedical research in this country. For example, he was surprised, as I expected him to be, about the low level of percentage renewals for MRC grants at the last competition. Given the low percentage of grants funded in the first place it is shocking that so many are turned down at renewal, mostly because of financial constraints. He was genuinely concerned about this. He was very supportive of both the scientific community and the university community. The point was made to him that if the cuts continue we may go past a point of no return and it will be very hard for Canada to rebuild a scientific community in disarray. He was open to this suggestion and concerned about its long term implications to Canada.

The end result of the meeting was an agreement that a document recapping the points discussed and making specific suggestions would be forwarded directly to his attention and he would bring this to the attention of his Cabinet colleagues. That document will be constructed in consultation with the CSI executive and with input from both the CFBS and from the Coalition. The primary success of this meeting was in opening a channel for our opinions to be heard by a member of Cabinet. As we outline below this kind of approach is the way we think that our Society can have a direct effect on government policy.

2. Plan of Action for Science Policy

We have considered many ways in which the CSI can have an effect on science policy. Ken Rosenthal, our last science policy representative, expressed some concern about the fruitfulness of the annual lobbying effort which we have participated in in the past. We had similar concerns. We are suggesting the following strategy based both on our discussion and the apparent success of the meeting described above. We suggest that the CSI identify individuals who would be willing to act as local science policy co-ordinators. One for each province. These co-ordinators would try to identify individual members of parliament from their province who are on important parliamentary committees such as the finance committee. The co-ordinator would then try to match these up with members of the CSI in their province who might know personally, or be in the riding of, this particular MP. We would then provide that CSI member with a package, similar to the one Tim put together for his meeting, to present our concerns to the MP. We feel that if the MP on these important committees are aware of what is going on they are more likely to support our national efforts through the other organizations such as the CFBS or the Coalition.

One of the main facts we wish to get across to the members is the effect of research support on job creation. We think that it is important to be able to show the MP's that a small amount of money spent on research at a university or hospital functions to attract money from outside sources, such as industry. To do this we would like to build a database of individual laboratories that can be used as examples of the attraction of research dollars from outside the country. This anecdotal evidence of job creation is more

powerful than any amount of statistics, especially if it applies to the riding or province from which the MP comes. It would also be worthwhile to build a database of the total external support received by CSI members since a job creation estimation can be made from those figures. The last point is that the MP is more likely to support our views if there is some personal contact. Therefore we are suggesting that invitations to MP's to tour a laboratory would be of significant importance.

In our discussions with various individuals with experience in lobbying it became clear that a targeted campaign is required. We obviously have neither the resources nor the patience to have every MP in Canada tour our labs. But if we can identify critical MP's on critical committees we can have a significant effect. If a spokesperson for a specific idea is backed up by one other member of a committee or Cabinet then the dynamic changes dramatically.

Members of the CSI Council will be in contact with individual members about this strategy and to enlist volunteers.

Postdoctoral position available



University of Alberta
Edmonton

Department of
Medical Microbiology and Immunology

Canada T6G 2H7

1-41 Medical Sciences Building, Telephone (403) 492-2309
Fax (403) 492-7521

A postdoctoral position is available immediately to study the regulation of tyrosine phosphorylation during T cell activation. Studies are focused on various aspects of src-related kinases and the CD45 tyrosine phosphatase in T cell signalling. Experience in either Immunology or cell biology is required. Start date is flexible and salary is commensurate with experience. Interested candidates are invited to send their C.V. and names of three references to:

Dr. Hanne Ostergaard
Department of Medical Microbiology and Immunology
860 Medical Sciences Bldg.
University of Alberta
Edmonton, Alberta T6G 2H7
Canada

Fax: (403) 492-0368
e-mail: hanne.ostergaard@ualberta.ca

IMMUNOLOGY INTERACTIVE, 1996 (Compact Disk)
Companion to Roitt's Immunology, 4th Edition
Male, Brostoff, Gray and Roitt
Times Mirror International Publishers Limited

Reviewed by Julie Rempel and Cindy Ellison, University of Manitoba

The compact disk "IMMUNOLOGY INTERACTIVE" is a concise, current and entertaining overview of the Immune System. Designed for use in a Macintosh or PC (Windows) environment, it is both impressive and "user friendly". The program begins with a short movie that introduces fourteen topics while emphasizing their interrelationships. Salient features of each are reviewed in greater detail in the second level of the program. If one wishes to further explore an area, he or she may do so by accessing Detail Pages in the third level.

Three-dimensional, full-colour animations in both the introduction and second level of the program illustrate principles such as cell to cell interaction, antigen presentation, phagocytosis and immunopathology. These representations and the accompanying narrative help the user to visualize how multiple cellular and molecular events can occur simultaneously; but the narrator may speak too quickly for those who are unfamiliar with immunological terminology. Additional figures, clinical photographs and video footage of biological events are provided in the third level. Furthermore, this program progresses quickly and allows the user to play back or fast forward through the levels.

The only major deficiency noticed was the absence of a glossary. If one were included, the program would be more amicable to those who are being introduced to Immunology. Although some terms are explained in the Detail pages, the list is incomplete, and locating a particular definition can be time-consuming as it requires a manual search through the program. A glossary that is accessible from anywhere in the second level would be more efficient. An index would also make the program more useful because one could access information on a specific topic. Perhaps in the second edition, these two features could be included making it possible to look up a term, read the definition and immediately access those portions of the program that discuss it in greater detail.

The creators of IMMUNOLOGY INTERACTIVE have produced one of the first visualizations of immunological events using state-of-the-art CD ROM technology. Although it is most appropriate as an introduction to many immunological concepts, a working knowledge of the terminology is required. It is also well-suited as a supplement to a graduate level course, or the corresponding text book. In summary, for those who are conversant in Immunology and would prefer to watch rather than read, this program provides a great way to review key concepts and integrate a rapidly growing body of information.

Book Reviews

AT WAR WITHIN: The double-edged sword of immunity.
by William Clark, Oxford University Press, 1995, 276 pages, \$27.95

Reviewed by C. A. Ottaway, Departments of Medicine and Immunology, University of Toronto.

This book is a popular account of immunity and the immune system. It addresses a variety of diseases and illness with immune components and aims to inform the reader about the ways in which immunity protects us from infectious diseases, the ways in which it can lead to harm through auto-immune reactions, and the obstacles which the immune system presents for tissue transplantation.

William Clark is the author of an earlier work, *The Experimental Foundations of Modern Immunology* which examined landmark experimental contributions to immunology. Here, he is at his best when describing the initial work and reports of investigators such as Ogden Bruton or Angelo DiGeorge on immune deficiency states in infants, or the efforts and experiments of Noel Rose, then a medical student, directed at establishing experimental immunity to thyroglobulin. Between specifics, however, Clark can easily fall into gross simplifications of history, biology and human behaviour. For example, "Pasteur and Koch were different personalities, each in a way reflecting his nation's stereotype..." hardly makes for good science, good history, or good reading. When discussing AIDS as a clinical problem the exhortation:

"What is so frightening about AIDS is the speed with which it is spreading, the incredible rate of increase in the number of cases diagnosed each year, with absolutely no cure in sight. One can forgive medicine for not dealing with plagues and epidemics in the past, but this is the age of computers and fibre optics and humans long ago on the moon. Why can't we get on top of this thing?" may not inspire the reader as either critical or helpful.

Although the intended audience for this book is the general public, the book is heavily burdened with jargon and acronyms, includes only a few illustrations of mediocre quality, contains no glossary, and therefore will have limited value for the non-specialized reader. A major defect, in my opinion, is the portrayal of immunology so dominantly through war metaphors. Every topic is approached through the perception of defences, attacks, targets, killing, and "good", as opposed to, "bad" players and outcomes. This perspective may not be Clark's alone, but the war metaphor distorts immune processes by considering only binomial ends. When viewed from the 21st century, this metaphor may be seen to have done for science what it has already done for politics and international affairs. Where are the metaphors by which Immunity can be expressed, not as a double-edged sword, but as a continuous, adaptive and integrated process?

EXQUISITE SPECIFICITY: The Monoclonal Antibody Revolution.

by Alberto Cambrosio and Pter Keating,

Oxford University Press, 1995, 243 pages, \$85.95.

Reviewed by C. A. Ottaway, Departments of Medicine and Immunology, University of Toronto.

Although Immunology as a systematic science is still quite young, it has attracted considerable attention from scholars of science. For example, notable recent contributions to this examination of immunology include Pauline Mazumdar's *Essays on the History of Immunology* (Wall & Thompson, 1989), Arthur Silverstein's *A History of Immunology* (Academic Press, 1989), and Alfred Tauber's *The Immune Self: Theory or Metaphor?* (Cambridge University Press, 1994). The present volume, *Exquisite Specificity*, provides a very different contribution to this area and breaks new ground.

The authors, a sociologist (Cambrosio) and historian (Keating), take an anthropological perspective to examine how the fusion experiments described by Georges Kohler and Cesar Milstein in 1975 grew from a specialized, esoteric and local endeavour to become widely adopted as a scientific tool and subsequently a commercial and industrial technology. The authors have had the direct co-operation of Milstein and Kohler and many other scientists. They have had access to lab notes and correspondence as well as the opportunity to collect the first hand stories of those who first began to apply this tool. A particular strength of this work is the critical examination it provides of the importance of informal means of interaction and communication and informal critical control mechanisms in the transfer and development of scientific contributions. The authors' analysis provides a powerful demonstration of the extent to which new scientific contributions rely upon scientists working in the mode of artists and artisans, in contrast to the algorithmic approach - so often the focus of grant applications and so beloved by granting agencies.

First, the means by which hybridoma techniques became generalized throughout science, and the ways in which the technology underwent globalization are examined. Then, the authors apply their anthropological methods to examining particular laboratory settings to study how this tool became routinized into larger research programs and how it was adapted into the commercial sector. Finally, the authors turn their attention to examining the meaning of innovation, patents and intellectual property within the scientific community as it was perceived by the participants in the development of hybridoma technology. This discussion illustrates both the poverty of the isolated legal view of these issues and the impoverishment that science will experience if it devolves the definition of these important issues to the lawyers and the beaurocrats.

This book provides a challenging and stimulating view of science as it is wrought, and the potential importance of social mechanisms in the development of science. It is also a really good read.

An INSERM-sponsored NK cell workshop will
be held in Paris, France in the Fall of 1996.

"Recent Advances in NK Cell Biology and the NK Cell Lineage during pregnancy"
"Données récentes sur l'origine et la biologie des NKs durant la gestation"

**Abstracts will be published in both French and English.
Presentations and discussion will be in English.**

Conference dates: September 2, 3 and 4, 1996 (Monday to Wednesday inclusive)

REGISTRATION DEADLINE: JUNE 30, 1996.

For further information, contact Dr. Gerard Chaouat:

Batiment de Gynecologie/Obstetrique Hopital Antoine Beclere. Avenue de la Porte de Trivaux
Clamart 92140, France Tel: 33-1-45374450; 33-1-45374444, ext. 3021; 33-1-45373820
FAX: 33-1-45374450 (allow 6 rings) E-Mail: Gchaouat@Dialup.FranceNet.fr

Organizing Committee:

Dr. G. Chaouat, France. Dr. E. Vivier, France. Dr. L. Moretta, Italy Dr. B.A. Croy, Canada. Dr. Y. Loke, UK

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Dr. Ian Stewart, England	Dr. Giorgio Trinchieri, U.S.A.	Dr. Eric Vivier, France
Dr. Theresa Whiteside, U.S.A.		

**Poster Presentations and Short Communications
are invited.**

Giudicelli Véronique¹, Bodmer Julia², Müller Werner³, Busin Chantal¹, Marsh Steven², R. Bontrop⁴, Chaume Denys⁵, Malik Ansar⁶ and Lefranc Marie-Paule¹

¹Laboratoire d'ImmunoGénétique Moléculaire, LIGM, IGMM, UMR CNRS 5535, BP 5051, 1919 route de Mende, 34033 Montpellier Cedex 1, France ²ICRF, London, UK ³IFG, Köln, Germany ⁴BPRC, Rijswijk, The Netherlands, ⁵CNUSC, Montpellier, France ⁶EMBL-EBI, Cambridge, UK

The ImMunoGeneTics (IMGT) database is an international database specializing in Immunoglobulins (Ig), T-cell receptors (TcR) and MHC molecules of all species, initiated and coordinated by Marie-Paule Lefranc, Montpellier, France. IMGT includes two databases : LIGM-DB (for Ig and TcR) and MHC/HLA-DB.

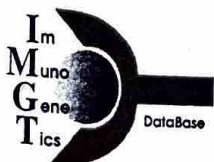
IMGT comprises expertly annotated sequences and alignment tables. LIGM-DB contains 14 394 Immunoglobulin and T cell Receptor sequences (6 600 fully annotated) from 61 different species. MHC/HLA-DB contains Class I and class II Human Leucocyte Antigen alignment tables. An IMGT tool, DNAPLOT, developed for Ig, TcR and MHC sequence analysis, is also available.

IMGT main goals are to establish a common data access to all immunogenetics data, including sequences, oligonucleotide primers, gene map and other genetic data of Ig, TcR and MHC molecules, from all species, and to provide a graphical user friendly data access. IMGT will have important implications in medical research (repertoire in autoimmune diseases, AIDS, leukemias, lymphomas), therapeutical approaches (antibody engineering), genome diversity and genome evolution studies. IMGT is funded by the EU BIOMED1 programme, the CNRS, the GREG, the ARC, the ARP, the Région Languedoc-Roussillon and the MENESR.

International nomenclature and scientific committee : T. Honjo (Japan), L. Hood (USA), M.-P. Lefranc (France), W. Müller (Germany), R. Riblet (USA), I. Tomlinson (UK)

Access : IMGT is freely available on the CNUSC WWW server : <http://imgt.cnusc.fr:8104>
(Contact : Denys.Chaume@cnusc.fr) and the EBI servers : <ftp.ebi.ac.uk/pub/databases/imgt> and <http://www.ebi.ac.uk/imgt> (contact : malik@ebi.ac.uk). LIGM-DB users are encouraged to report errors or suggestions to giudi@ligm.crbm.cnrs-mop.fr.

IMGT coordinator : Marie-Paule Lefranc, lefranc@ligm.crbm.cnrs-mop.fr. (fax : +33 67 04 02 31)



IMGT
THE IMMUNOGENETICS
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