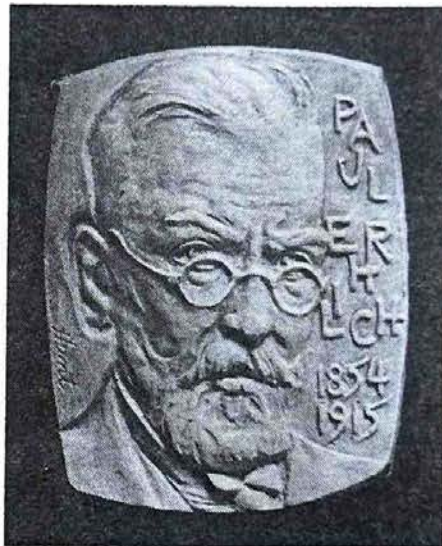


December 1971

of the Canadian Society
for
IMMUNOLOGY



BULLETIN

de la Société Canadienne
d'IMMUNOLOGIE

vol. 5 no. 1

Published by: The Canadian Society for Immunology
- La Société Canadienne d'Immunologie

Council:

B. Rose	-	President	F. Paraskevas
S. Dubiski	-	Vice-President	L. Diener
P. Gold	-	Secretary	J. Bienenstock
J. Shuster	-	Treasurer	D.G. Ingram
A. Sehon	-	Past President	J.B. Dossetor
			D. Dufour

Editor of the Bulletin:

S. Dubiski
Department of Immunology
The Toronto Western Hospital
1 Spadina Crescent
Toronto 179
Ontario
Canada

Telephone: 928-6269 Area Code (416)

BULLETIN

OF THE CANADIAN SOCIETY FOR
IMMUNOLOGY

DE LA SOCIÉTÉ CANADIENNE
D'IMMUNOLOGIE

Vol. 5, No. 1

December, 1971

CONTENTS

Bram Rose: PRESIDENT'S ADDRESS.....	1
MINUTES OF THE BUSINESS MEETING, JUNE 16, 1971.....	2
New Members.....	4
Statement of Accounts.....	6
Auditors' Report.....	7
Amendments to the Constitution.....	7
Dr. Joseph Shuster Accepts the Office of the Treasurer.....	9
C.S.I. Dinner in Toronto.....	9
A. L. de Weck: INTERNATIONAL UNION OF IMMUNOLOGICAL SOCIETIES.....	10
FIRST INTERNATIONAL CONGRESS OF IMMUNOLOGY.....	11
THE TEXTS OF THE CITATIONS FOR DISTINGUISHED SERVICE TO IMMUNOLOGY.....	12
S. Dubiski: THE PAUL EHRLICH MEDAL AND THE ARTIST.....	13
CONGRESS STATISTICS.....	14
CANADIAN ISSUE OF "THE MEDICAL CLINICS OF NORTH AMERICA".....	15
H. H. Fudenberg: "COST-EFFECTIVENESS" OF RESEARCH IN IMMUNOLOGY.....	15
J. Bienenstock: IMMUNOLOGIST ON THE LABOUR MARKET.....	18
J.B. Dossetor and E. Diener: M.R.C. TRANSPLANTATION IMMUNOLOGY UNIT....	20
NEWS:	
News from Glasgow.....	21
Dr. Moloney Receives First Best Prize.....	21
S. Sved: NEUROBIOLOGY GROUP.....	22
A.S. West: SCITEC.....	23
POSITIONS VACANT.....	27
FORTHCOMING EVENTS.....	31

PRESIDENT'S ADDRESS

I should like to take this opportunity of thanking the membership of the Canadian Society for Immunology for the honour they have bestowed upon me. Being somewhat older than the majority of you, it has been of some considerable satisfaction to have had the opportunity of witnessing the growth of Immunology in Canada. Starting in 1950 with rather modest units and mushrooming as it has in these past five years or so, as though stimulated by some mitogen, the Canadian Society for Immunology now occupies third place in size among the various member societies of the Canadian Federation of Biological Societies. When one considers that this organization is but five years old, the growth rate has been extraordinary but I have refrained from constructing a growth rate curve. It is also quite obvious that the standard of excellence of the scientific contributions compares quite favourably with our counterparts elsewhere in the world.

In keeping with the high level of performance initiated by Dr. Cinader, our Founder-President as well as those which were continued by Dr. Alec Schon, our immediate Past President, your present Council has been busy with the organization of a Symposium for the forthcoming meetings in June. The details and the topic of the Symposium will be published shortly.

Our next meeting will be held in the City of Quebec at Laval University in the month of June. Quebec is a delightful place for meetings providing as it does, not only the facilities for good scientific fare, but much in the way of a unique international atmosphere coupled with gourmet dining. I sincerely hope that we shall have a good attendance and the submission of the usual number of excellent abstracts for presentation.

We have come a long way in the field of Immunology. It has occurred to me, as well as a number of others that it is perhaps time for the inauguration of a Canadian Journal of Immunology. As to the exact title of such a publication or whether or not it should incorporate both fundamental and clinical Immunology, should give you some food for thought prior to this meeting so that we could perhaps devote some time at the next business meeting concerning the merits or otherwise of such a manoeuvre.

I am informed by our excellent multivalent Secretary-Treasurer complex that our finances are in good order. I assume that we are still in the stage of growth, viable and competent. In keeping with his usual flare for innovation, Dr. Phil Gold has provided the CSI with a label. He has not yet indicated whether it fluoresces, or even if it is specific. It will however serve the important purpose of 'flagging' your incoming mail so that you will, I hope, read it.

I look forward to seeing you all in Quebec in the month of June.

Bram Rose

At the same time, Dr. Stewart put a motion suggesting that a warning to a delinquent member be mailed in the next year's billing. This motion was seconded by Dr. Sabbadini.

Voting was first asked by the membership for the amendment proposed by Dr. Osoba on Dr. Gold's motion: The amendment was passed. Two voted against.

This was then followed by voting on the motion of Dr. Gold as amended by Dr. Osoba: The motion passed. One voted against.

c) Subsequently, the proposed amendment to By-Law III, Section 2, Election, was read. It was moved by Dr. Rose and seconded by Dr. McPherson. Dr. Diment asked for an addition to be made to this amendment. He put forward a motion which if approved, is to be added at the end of the proposed amendment:

"If an application is rejected by the council, the Secretary shall inform the applicant's sponsors of the reasons. At the request of the sponsors, rejected applicants will be reconsidered at the Annual Business Meeting and the question shall be decided by the majority vote of the members present."

- This motion was seconded by Dr. Bienenstock. Motion passed.

- The proposed amendment to By-Law III, Section 2, as modified by Dr. Diment was passed.

5. Other business: a) Representatives for International Union: The Society should appoint two representatives for the International Union. Dr. Paraskevas puts the motion suggesting the names of Dr. Cinader and Dr. Schon, as representatives for the assembly till the next Congress. Dr. Dent seconds. Motion passed. b) Sustaining members: Dr. Cinader moves that companies should be admitted to the Society in the category of Sustaining members. Seconded by Dr. Gold. Motion passed. c) Five-year memberships: Dr. Cinader moves that a five-year membership be established and presented to the Federation Board. Dr. Bienenstock seconds. Motion passed. d) SCITEC: Dr. Schon asked that C.S.I. pays 10 cents per capita for SCITEC. Dr. DeVeber seconds. Motion passed.

The business was adjourned at 2.00 p.m. followed by the Half-Day Symposium of the Society.

F. Paraskevas, Secretary

APPENDIX "A"

NEW MEMBERS

The following persons were elected to the CSI membership at the Annual Business Meeting:

E = elected member

A = associate member

1. Claude Bernard (A)
Institut de Microbiologie et d'Hygiene
de l'Université de Montreal
531 Boulevard des Prairies
Case Postale 100
Laval-des-Rapides, Quebec
2. Ching-Hong Chen (E)
Dept. of Immunology
University of Manitoba
795 McDermot Avenue
Winnipeg 3, Manitoba
3. Connie Jean Gregory (A)
The Ontario Cancer Institute
Dept. of Medical Biophysics
500 Sherbourne St.
Toronto 5, Ontario
4. Roland J. Boegman (E)
Queen's University
Dept. of Pharmacology
Kingston, Ontario
5. Kenneth B. Orr (A)
Manitoba Cancer Foundation
700 Bannatyne Avenue
Winnipeg 3, Manitoba
6. Sho Tone Lee (A)
Manitoba Cancer Foundation
700 Bannatyne Avenue
Winnipeg 3, Manitoba
7. Dharam P. Singal (E)
McMaster University
Dept. of Surgery
Hamilton, Ontario
8. E.R.M. Kay (E)
University of Toronto
Medical Science Building
Dept. of Biochemistry
Toronto 181, Ontario
9. Alev Guclu (E)
Dept. of Pathology
Sir Charles Tupper Medical Bldg.
Dalhousie University
Halifax, Nova Scotia
10. Robert A. Nelson Jr. (E)
Lady Davis Institute
3755 Côte Ste Catherine Road
Montreal 249, Quebec
11. Guy Jean Laroye (A)
Staff Pathologist
Princess Margaret Hospital
500 Sherbourne Street
Toronto 5, Ontario
12. Guy Pelletier (E)
Hôpital du Saint-Sacrement
Lab. de Recherches
1050 Chemin Ste-Foy
Quebec 6e, Québec
13. Ralph D. Wilkinson (E)
Dermatology Research Unit
McGill University
687 Pine West
Montreal 112, Québec
14. Giuseppe Tridente (E)
Transplantation Unit
Provincial Lab.
Edmonton, Alberta

15. Sylvain Pitzele (A)
McIntyre Medical Sciences Centre
3655 Drummond Avenue
Montreal, Québec
16. Marja Soots (E)
Toronto East General Hospital
Dept. of Hematology
825 Coxwell Avenue
Toronto 13, Ontario
17. Margaret L. McNay (A)
University of British Columbia
Dept. of Zoology
Vancouver 8, B.C.
18. A.B. Acton (E)
University of British Columbia
Dept. of Zoology
Vancouver 8, B.C.
19. Liivi Kasak (E)
Université du Québec
Section de Biologie
C.P. 500
Trois-Rivières, Québec
20. James R. Baldwin (A)
University of Mississippi
Box 5203
University, Mississippi 38677
U.S.A.
21. Donald W. Paty (E)
Newcastle General Hospital
Demyelinating Diseases Unit
Newcastle-Upon-Tyne
England
22. Susan Tolnai (E)
Dept. of Histology and
Embryology
Faculty of Medicine
University of Ottawa
Ottawa, Ontario
23. André Lussier (E)
Centre Hospitalier Universitaire
de Sherbrooke
Chemin de Stoke
Sherbrooke, Québec
24. Istvan Berczi (E)
Dept. of Immunology
Faculty of Medicine
795 McDermot Avenue
Winnipeg 3, Manitoba

APPENDIX "B"

CANADIAN SOCIETY FOR IMMUNOLOGY

Statement of Accounts for 1970 - 1971
As of May 20, 1971

	Cr.	Dr.	Balance
Bank balance as at May 14, 1970			\$ 2,131.33
Membership dues and levies	\$ 2,913.50		
Uncashed cheque	1.00		
Uncashed cheque	3.00		
Adjustment June, 1970 deposit	.15		5,048.98
Postage for dues, Bulletin		237.87	
Printing, stationery for Bulletin		349.49	
Telephone - long distance calls		19.86	
Addressograph plates and frames		23.84	
SCITEC		200.00	
International Union of Immunological Societies		75.00	
Cheque returned, not signed		10.15	
China House Restaurant deposit for Annual Meeting (to be recovered)		50.00	
Federation Levy cheque		801.23	\$ 3,281.54
Bank balance as at April 29, 1971			\$ 3,266.39
Outstanding deposits, May 19, 1971			10.15
Outstanding deposits, May 19, 1971			5.00
		TOTAL	<u>\$ 3,281.54</u>

L.L. deVeber
Treasurer, C.S.I.

APPENDIX "C"

THE UNIVERSITY OF WESTERN ONTARIO, LONDON 72, CANADA

May 31st, 1971

Dr. Alec Sehon
President
Canadian Society for Immunology
University of Manitoba
Winnipeg, Manitoba.

Dear Dr. Sehon,

We have examined the books of the Canadian Society for Immunology for the year 1970-1971 and found the accounts balanced.

Yours sincerely,

S. K. Singhal

N.R. Sinclair

APPENDIX "D"

AMENDMENTS OF THE CONSTITUTION AS PROPOSED BY
MEMBERS OF THE
CANADIAN SOCIETY FOR IMMUNOLOGY

N.B. Please note that this is not the final text of the amendments, as some modifications were proposed from the floor during the Business Meeting and approved by vote. The final text of the amendments was not available at the time of publication of this Bulletin but it is hoped that it will eventually be published either in the booklet or in one of the next issues of the Bulletin. Ed.

English Text: Article IV. Management of the Society

The management of the Society shall be vested in a Council consisting

of a President, Vice-President, Secretary, Treasurer, the immediate Past-President and six Members of Council, elected as provided by the By-Laws.

French Text: Article IV. Conseil d'Administration

L'administration de la Société est confiée à un conseil d'administration composé du président, du vice-président, du secrétaire, du trésorier, le dernier président en exercice, et de six conseillers, au titre prévue par les règlements.

English Text: By-Law III, Section 2, Election

The candidate for elected membership, corresponding membership or associate membership, shall be elected by the Council at regular intervals upon receipt of the documents of the applicants from the Secretary. (For election to Honorary Membership see By-Law I, Section 2 and to Emeritus Membership see By-Law I, Section 3).

French Text: Règlements, Chapitre III, Article 2, Elections

Le candidat au titre de membre ordinaire, membre correspondant ou membre associé sera élu par le conseil d'administration à des intervalles réguliers, après avoir reçu du secrétaire des documents des postulants. (Les conditions d'admission d'un membre honoraire sont décrites à l'article 2 du chapitre I des règlements, celles d'un membre émérite à l'article 3 du chapitre I).

English Text: By-Law VI, Section 2, Dues in Arrears

Any member whose dues to the Society are in arrears for one year shall not be eligible to hold office in the Society or to submit or sponsor communications at any scientific meeting of the Society.

When the dues of any member of the Society are two years in arrears and when the member has been properly notified by the Treasurer of non-payment of dues by registered mail, then his membership in the Society shall automatically cease. Such a person may be re-installed as a member upon application to the Secretary, payment of arrears to the Treasurer and a majority vote of Council.

French Text: Règlement, Chapitre VII, Article 2, Arrérages

Tout membre de la Société qui ne paye pas sa cotisation pendant un an perd son droit d'élection au conseil d'administration et se voit refuser le droit de présenter ou de parrainer des communication scientifiques aux réunions de la Société. Un membre qui néglige de verser ses cotisations à la Société pendant deux années consécutives malgré un avis officiel (lettre recommandée) du Trésorier cesse de ce fait de faire partie de la Société. Cet ancien membre peut toutefois être réintégré dans la Société après en avoir fait la demande au secrétaire, avoir payé ses arrérages au Trésorier et avoir obtenu l'assentiment de la majorité des membres du conseil d'administration.

DR. JOSEPH SHUSTER ACCEPTS THE OFFICE
OF THE TREASURER

Unfortunately, Dr. A. Guerault who has been elected as Treasurer for 1971-1973 could not accept his office. The President and the Secretary searched for an alternative. Their efforts resulted in selecting Dr. Joseph Shuster as a candidate for the Treasurer. Dr. Shuster very kindly agreed to accept this office and was, subsequently, appointed by the Council as a Treasurer (1971-1973).

CSI DINNER IN TORONTO

During the last Federation Meeting in Toronto the CSI has held a dinner, the tickets for which cost \$ 6.00. Unfortunately, a number of people had not paid for their tickets and, as a result of this, Dr. Brian Underdown who very kindly organized this dinner was short \$50.00. It is hoped that anybody who did not pay for his dinner will send the money to Dr. Underdown after having read this note.

Standardization Committee will be in charge of establishing and coordinating standardization procedures for a whole variety of immunological reagents. Various Subcommittees on specific projects have already been established. The Committee will work in close cooperation with national and international organizations concerned with standardization. A Nomenclature Committee, chaired by Dr. E. Dray, has been established and several subcommittees on specific nomenclature problems created. Dr. G. Torrigiani from WHO Immunology Unit is Secretary of the Nomenclature Committee. An Education Committee, chaired by Dr. E. Haber, has also been set up and will endeavour to foster exchange of educational material in immunology and to facilitate the organization of immunology courses.

A. L. de Weck

1ST INTERNATIONAL CONGRESS OF IMMUNOLOGY, WASHINGTON

AUGUST 1-6, 1971

Those who attended the Congress do not have to be told of the undisputed success of this meeting. We owe this success to the work of the local Organizing Committee and its Chairman, Dr. M. Landy and the International Union of Immunological Societies and its President, Dr. B. Cinader. The organizers of the Congress combined the flawless efficiency of the FASEB meetings with new ideas which were put to test for the first time in Washington. Some of these experiments succeeded - in most cases this was true for the workshops. They provided a form for discussion, exchange of experience, information and rumours and formed a "safety valve" which let off the steam from participants who had the urge to talk, to give reports and communications and who otherwise could not do so in the format of the general sessions. Such informal discussion was, in my opinion, a whole order of magnitude better than the traditional Atlantic City format. The discussion held at the workshops was then reported by the chairman of each workshop during an afternoon general session. The session I attended was, to put it mildly, dull. I think that there are two reasons for this failure: a) There was a time conflict with other workshops. The session which was devoted to discussion of the previous day workshops run concurrently with new workshops and the most aggressive discussants were attending the workshops. b) A lot of steam has been let out in the workshops, not much remaining for the general session. This was, however, an interesting experiment which was worth doing and I hope that the organizers of the future Congresses will keep on with new experiments and will never allow the format to fossilize.

I will not discuss the social programme, which according to my wife and daughter (age 7 $\frac{1}{2}$) was terrific. I obviously could not benefit much from it, since most of the attractions interfered with the sessions. I would, however, like to mention a few words about the last event, the dinner, during which the presentation of commemorative plaques to senior immunologists for "distinguished service in immunology" took place. This ceremony, during which plaques were presented to J.R. Marrack, M. Heidelberger, F. Haurowitz, P. Grabar and F.H. Burnet was planned with a true human touch. On such occasions there is always a danger that the organizers might try to improve the effect and overdo it. As a result the whole ceremony could become a ridiculous and pompous farce. The ceremony at the Congress dinner was anything but such a farce. I must admit that I was deeply moved by it and I think that everybody else was too.

S. Dubiski

THE TEXTS OF THE CITATIONS FOR
DISTINGUISHED SERVICE TO IMMUNOLOGY

JOHN R. MARRACK

A pioneer in the physico-chemical interpretation of antigen-antibody interactions: his revolutionary ideas have become commonplace in his lifetime.

MICHAEL HEIDELBERGER

The transformation of immunology from an art to an analytical discipline had its beginning in his demonstration of the chemical nature of immune reactions and the development of quantitative methodology.

FELIX HAUROWITZ

His early conception of immunological reactions in molecular terms and his pioneering studies on the diversity of antibodies paved the way for contemporary views of antibody specificity.

PIERRE GRABAR

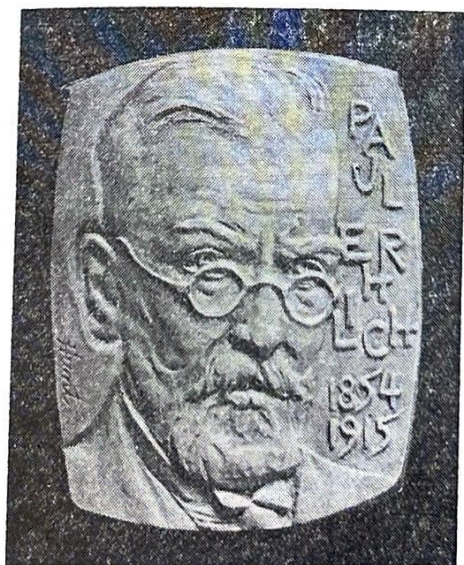
His broad biological interests, leading to the development of discriminative analytical procedures provided immensely valuable immunological tools for the experimentalist and clinician.

MACFARLANE BURNET

His intellectual leadership as exemplified by his formulation of the theory of clonal selection and the linking of antibody diversity to cell differentiation had an immense impact on modern immunobiology.

THE PAUL EHRLICH MEDAL AND THE ARTIST

The citations given to the senior immunologists were engraved on commemorative plaques showing the portrait of Paul Ehrlich and the Congress emblem - the familiar hapten-antibody complex based on the Green and Valentine electron micrograph.



Each of the participants, instead of a plaque, received a medal with Paul Ehrlich's portrait on the obverse and the Congress emblem with the inscription "FIRST INTERNATIONAL CONGRESS OF IMMUNOLOGY WASHINGTON 1971" on the reverse. The idea that the Congress should be

commemorated with a special medal was excellent in itself, but the way it has been carried out, calls for special praise for the Organizing Committee. The medals are not only pleasant souvenirs of the Congress but have high artistic merit and may soon become collectors' items.

Impressed by the artistic quality of the medal I enquired about the artist who created it. I was amazed to find out that the medal for the Washington Congress was designed by a Canadian artist, in fact a Torontonian. This stimulated my curiosity further and led me to the discovery of a few facts about the artist, Mrs. Hunt.

Mrs. Dora de Pédery Hunt is a medallist of international recognition. She was born in Hungary and came to Canada in 1948. Her medals were shown at several International Exhibitions of Contemporary Medals (The Hague, Rome, Athens, Paris, Madrid, Prague, Bratislava) and are part of many famous public collections, including the National Gallery of Canada, the Smithsonian Institute, the Royal Cabinet of Medals in Brussels and others. Mrs. de Pédery Hunt has found her commission particularly challenging. She tried to portray the spiritual quality of Paul Ehrlich and, at the same time, to show him as a human being, to make the medal informal but still dignified. The photograph of the medal is the best testimony that she had succeeded in her efforts. The reverse did not present such a challenge for the artist. Here, the Congress emblem and the necessary information were to be found. In executing these essential details none of the high standards so evident on the obverse were sacrificed, for instance, all the lettering was done by hand. The work on the medal was not over after the design was made. The artist with the help of a craftsman did all the casting and finishing herself. In spite of the need for so many copies, each medal was handmade and handfinished. In my opinion Mrs. Hunt has every right to be proud of her creation.

S. Dubiski

CONGRESS STATISTICS

Registration	:	over 3,400 persons
Foreign registrants	:	1,000 persons from 45 countries

Travel and subsistence awards totalling \$ 75,000 were made to 246 participants, primarily young scientists from abroad.

The Congress was sponsored by the International Union of Immunological Societies representing 15 societies. During the five mornings 15 symposia and during the four afternoons 84 workshops were held. The workshops were limited to 60 participants.

The humidity in Washington must have been 99% !!

ALL-CANADIAN, ALL-IMMUNOLOGY ISSUE OF
THE MEDICAL CLINICS OF NORTH AMERICA

The May 1972 issue of the Medical Clinics of North America will, for the first time, consist entirely of articles written by Canadian contributors. The subject of the May number to be edited by Dr. Jules Harris is "Problems in Clinical Immunology". The issue will consist of a total of eighteen papers. Included in this group are: "Thymic Function, Immunological Deficiency and Autoimmunity" by Osoba, "The Changing Pattern of Disease associated with M-Components" by W. Pruzanski and M.A. Ogryzlo, "The Clinical Application of Antilymphocyte Globulin" by H. Taylor, "HL-A Antigens in Clinical Transplantation" by J.A. Falk and R.E. Falk, "Immune Mechanisms of Mucosal Resistance" by J. Bienenstock, "Genetics and Regulation of Rabbit Immunoglobulin Allotypes" by S. Dubiski, "Human Bone Marrow Transplantation" by D.H. Cowan and R.A. Phillips, "Immune Deficiency States associated with Malignant Disease in Man" by J.E. Harris and R.C. Bagai, and "The Future of Tumour Immunology" by B. Cinader.

"COST-EFFECTIVENESS" OF RESEARCH IN IMMUNOLOGY

According to the popular opinion medical research is a very costly affair that can be justified only by the humanitarian aspects involved. One would think, that it would never survive a "cost-effectiveness" analysis if one ignored these humanitarian aspects. Dr. H. Fudenberg was of a different opinion and he showed that he was right. In his calculations he arrived to astounding multi-billion figures representing benefits and savings from the application of the results of medical research.

In the article below, Dr. H. Fudenberg proves that medical research may bring enormous savings to the country's economy. Because of shortage of space and relative irrelevancy to the immunologists we have omitted the section dealing with chemotherapy of tuberculosis.

1. POLIOMYELITIS

The eradication of poliomyelitis resulted directly from research funds granted to determine whether viruses would grow in monkey kidney. They did!!! Therefore, it became possible to grow large quantities of viral material so that the Salk and Sabin vaccines could be given to virtually all persons at risk.

Insofar as I can ascertain, economic data on cost-benefit poliomyelitis are available only for the type of poliomyelitis known

as paralytic poliomyelitis, and only for the years 1955-1961. During this seven-year period, the use of Salk vaccine prevented approximately 154,000 cases of paralytic polio as based on the difference in incidence during this period and the period during the three immediate pre-vaccination years 1955-1961; of those affected during this period, again based on data from the preceding three years, 12,500 would have died, 14,300 would have experienced no residual disability; of the remainder, 36,400 would have been severely disabled, 58,100 moderately disabled, and 32,700 have suffered only slight disability.

1) Estimates of the medical care costs avoided through prevention of paralytic cases during these seven years are estimated at \$327,000,000 based on hospital costs at that time (obviously, much higher since), length of hospital stay, cost of other services (braces and appliances, special nursing, physical therapy, etc.).

2) Estimates of loss of lifetime income, based on age at which morbidity and mortality occurred, and on sex, the per capita lifetime income lost (assuming 100% loss of income for deaths), 50% for severe disability, 25% for moderate disability, and 10% slight disability for males, and a total cumulative income; for males of \$226,040, and for females of \$44,850 was \$6,389,700,000 (for males, approximately \$5.1 billion, and for females 1.3 billion).

Total Savings:	\$6.7 billion (0.3 billion from 1) and (6.4 billion from 2)
Costs: Purchase of Vaccines	\$129,800,000
Physicians Vaccination Fees	\$468,600,000
Vaccine Administration	\$ 13,300,000
	<hr/> \$611,700,000
Vaccine Research and Field Trials	<hr/> \$ 41,300,000
Estimated Net Gain Accrued	\$6,053,000,000

11. MEASLES

An immunization effort against measles was initiated in the United States in 1963; this again, was made possible by the research which made large-scale propagation of viruses possible. (Ender, J.F. and Peebles, T.C.: Propagation in tissue cultures of cytopathogenic agents from patients with measles. Proc. Soc. Exp. Biol. Med., 86: 277-286, 1954). In 1968, the estimated number of measles cases was 250,000, about 6% of the estimated mean for the ten-year period (1953-1962) preceding immunization.

For every 100,000 cases of measles, 100 cases of measles encephalitis can be expected to occur; of these 100, 10 will die, and

The information obtained is heartening especially at a time when restriction of funds and cut-back of training programmes in the States is occurring, and at a time particularly when in the States just as much as in Canada, an over-production of graduates has occurred in certain areas such as biochemistry.

The exact size of the sample is not known to us but the number of pre-doctoral students in current training programmes was 151. The number of post-doctoral students in the sample was 127. It was felt that the output of immunologists reflected in the data was near accurate since the great majority of departments was polled. The results showed that the need for immunologists over the first year 1971 to 1972 will exceed the supply by a factor of 3. Another interesting point emerging from the information was that none of the departments or individuals polled felt that anyone receiving a Ph.D. in 1970 in the broad area of immunology was either currently unemployed or employed in a job not suitable to their training. In answer to a question as to what the needs in clinical departments would be for M.D.'s or Ph.D's trained in immunology assuming that current research grant support would continue at the present level (at a considerably restricted level) the outlook appeared to be remarkably optimistic. The needs were 80 in 1971-72 with about half that number being required annually in the subsequent year 1972-75.

When we think of the development of immunology in this country we have been repeatedly asked in the last year or two to think to the future and exercise our responsibilities towards the graduate students and fellows we train. Many of the leading centres involved in this training of immunologists in Canada have often said in an anecdotal way that they did not believe that the immunologists being trained were becoming a glut on the market. We have here, albeit from the United States, some documentation of this point of view.

In order to prevent the sort of problems which rather headlong training of graduate students produced in the past, we should have available this information on a yearly basis in Canada, as to the eventual outcome and needs for immunologists so that trends and reasonable forecasts could be made and thus help accelerate, or potentially decelerate our training programmes. I would be interested in hearing from other readers of the Bulletin as to your thoughts on the subject of needs for immunologists and employment possibilities for them so that we might, out of this, may be, carry a recommendation to the Society to collect this information on an annual basis and make it available to all members. In addition, it should be pointed out that if anyone has this type of information already at hand and would make it available it could be very helpful in the continuing efforts of the Society at various levels to keep governmental and other funding agencies informed as to the true need for immunologists and training positions in immunology in Canada.

J. Bienenstock

M.R.C. TRANSPLANTATION IMMUNOLOGY UNIT
IN EDMONTON

Any new research institution has to pass through a period during which it becomes established. It is heartening to realize that the MRC Transplantation Group at the University of Alberta has successfully passed this stage and is now in full activity. As intended by the Medical Research Council the Group's effort is not only to gather information on basic aspects of immunobiology but to use this information to elucidate or manipulate control mechanisms as they seem relevant to clinical problems. This approach is amplified by work in both the basic research and the clinical research teams of the Group on aspects of immunoregulation. The elucidation of cell membrane associated mechanisms of tolerance induction has prompted the search for serum factors in transplant patients and other individuals sensitized against histocompatibility antigens, which mediate immune homeostasis. Data obtained so far seem to indicate that our model of antigen-antibody mediated tolerance applies in particular to transplantation antigens. Our view is that antigen-antibody complexes act as blocking factors in transplant and tumor enhancement. These complexes may not only act at the peripheral but more important, at the central level, i.e. the immunocompetent cell, either reversibly or irreversibly, depending on their steric configuration.

Parallel with these studies, we have started a program in collaboration with the Biochemistry Department of this University with the aim to visualize on autoradiographs and to biochemically test the events accompanying the interaction between an immunocompetent cells surface and antigen molecules of different structures. The successful labelling of an antigen with low energy isotopes has enabled us to precisely localize the attachment site at the cell surface of a specific antigen and to study the kinetics of membrane movement in response to interaction with the antigen. We hope to find correlations between parameters of membrane kinetics which correlate with certain molecular qualities of the antigen or antigen-antibody complexes as well as with the immunological behaviour of the cells concerned. This should enable us to learn how an antigen has to be modified in order to be immunogenic or tolerogenic. Work on the ontogeny of the immune system is along similar lines: here we are about to finish a study on the generation of clonal diversity from one single multipotential stem cell with respect to antigen recognition and immunocompetence. Of particular concern is the fact that at some time during the ontogenic process of lymphoid cells, there occurs the induction of tolerance to self antigens. We hope that ontogeny experiments in combination with cell separation techniques will shed light into this problem. The above studies have produced offshoots into work on the inactivation of immunocompetent cells in bone marrow grafts using physical and pharmacological means.

It was one of our major concerns to encourage collaboration within the University campus as well as with research institutions elsewhere. With the Department of Medicine, experiments with radio-labelled human cerebral basic protein have revealed that normal individuals possess lymphoid cells capable of binding this antigen. Attempts are made to use this information for diagnostic purposes in multiple sclerosis. During

this year collaborative research has successfully been carried out with the Walter and Eliza Hall Institute. In 1972 we are planning research with the Basel Institute of Immunology.

The clinical research team is involved in a number of immunologic monitoring systems in HL-A exposed individuals. Attempts are also being made to develop systems that might be sensitive to non HL-A sensitised individuals in blocking these systems and that this will provide a basis for using the principle of antibody mediated tolerance induction or enhancement in man.

J. B. Dossetor
E. Diener

N E W S

NEWS FROM GLASGOW

Dr. A.C. Wardlaw, formerly from Toronto, one of the founding members of the CSI and a frequent contributor to these pages, took a position of the Professor of Microbiology in Glasgow, Scotland. He sends his best wishes to all his colleagues in this country, apologizes for being a poor correspondent and enquires for a post-doctoral candidate (see "POSITIONS VACANT").

DR. MOLONEY RECEIVES FIRST BEST PRIZE

Dr. Peter J. Moloney was awarded the first annual Charles H. Best Prize for his contributions to the study of the immunochemistry of insulin. The prize consisting of a citation, gold medal and \$1,000 was given to Dr. Moloney by Dr. Best at the Fifth Canadian Hoechst Workshop on Diabetes held in Mont Gabriel, Quebec last October.

Some confusion may exist as to the intended role of SCITEC in a 'voice for science'. There has never been any intent that SCITEC would be the only organization through which a 'voice of science' would be heard. Depending on the issue at hand, a voice could come from different sources. For example, in the field of biology for a particular issue it might suffice for the Entomological Society of Canada to be the voice; a broader issue might call for the voice of the Biological Council of Canada, and for a still broader issue the combined voices of the BCC and the Canadian Federation of Biological Sciences should be heard. Finally, issues such as the preservation of the environment, the population problem, or the support of University vs Government research should call for the voice of all scientists, and here is where SCITEC should play a leading role. It is not to suggest that individual societies, or even individual members, should not be heard on broad issues.

SCITEC should also act as a 'clearing house'. For example, a parliamentary committee might wish to obtain a statement on a particular issue. SCITEC should provide a service through which such a request could be funneled to a particular society, or even group of individuals, quickly. SCITEC must be aware of the problems faced by individual societies. One of these is certainly communication. Particularly for a society whose numbers are small, it may be difficult to be aware of what is going on, and to know what matters the society should respond to.

In its infancy, without a permanent secretariat (which it now has), SCITEC itself has had communication problems. In theory, since the suggestion of the present Study has been discussed in SCITEC Council meetings, the undertaking should be widely known. My impression is that this is not the case.

For the present Study one reason for avoiding a detailed questionnaire is that the kinds of societies included run a gamut from large organizations with a major profession (regulatory) component, to small 'scientific' societies with less than 100 members, to social science organizations whose discipline tools and methods are far removed from those used by engineers and scientists (sensu stricto).

However, in advance of the personal contacts that we hope to make, it should be helpful for society officers to have some indication of the kinds of topics that may come under discussion. I have chosen to provide this indication, at least in part, by a series of statements about societies. It does not necessarily follow that I subscribe to all the statements, and in fact several statements are inserted for the deliberate purpose of 'needling', and hopefully evoking a response. The list is not intended to be all inclusive, nor are the statements all mutually exclusive.

It is unlikely that any one society will be in a position to comment on all statements. The order of the statements has no particular significance. Written comments will be welcomed from any and all sources. There may be particular individuals in various societies who will be best qualified to comment on particular statements. Hopefully, you will have a chance to mull over these statements, which may suggest other areas of discussion, in advance of our personal meeting.

1. For at least the SCITAC founding societies, some common problems are: funding, dispersion of membership, competition from U.S. societies, bilingual communications, conflict between regional and national bodies, Journal competition for highly qualified research reports, and proliferation or overlapping of interests among societies.
2. Many societies are in financial difficulties. The healthy ones are in those areas in which there are also provincial credentialing or licensing associations (doctors, lawyers, engineers).
3. The U.S. counterparts of many Canadian societies are financially solvent.
4. The proliferation of new societies in the post-war years has resulted in a fragmentation which is in some respects undesirable, and has contributed to financial problems.
5. Many societies have existed only by indirect subsidies from government organizations. If a society is to have a voice that will be listened to, it must become self-supporting.
6. For many non-professional societies the proportion of eligibles who are members is tragically small. A society cannot speak effectively for its discipline under these conditions.
7. Many societies do not have the resources to give the leadership and undertake the activities they should sponsor.
8. Most societies, particularly the non-professional ones, are viable because of the unselfish effort of a relatively few individuals.
9. Many societies operate on 'benevolent time' because they do not have the resources for a paid secretariat.
10. The sharing of a secretariat might ease the problems of some societies.
11. Affiliation with an 'umbrella' organization of some degree is not without its drawbacks. A society may feel that it does not get its share of attention.
12. Rank and file members of societies are commonly disinterested. Many individuals join a society primarily to obtain the society publications(s), and to go to an Annual Meeting whenever possible.
13. Commonly, younger members of a society are not given a sufficient role and responsibility.
14. Government employed members of societies tend to avoid being 'activist'.
15. The role of a society in perpetuating self interests is valid.
16. Many societies give lip service to serving the public interests.
17. Few non-professional societies have, in recent years, gone in for a critical self-examination, a re-assessment of constitutionally stated objectives, and long-range planning.

18. Many societies are interested in playing a more important role in science policy matters, in better serving Canada, but find it difficult to achieve these aims.
19. It is the 'band-wagon' thing these days for a society to have a Science Policy committee. In many cases, such committees are relatively inactive.
20. It is difficult for a society to establish an effective and efficient machinery by which the views of its members can be synthesized. When a society speaks, whose voice is it?
21. Many issues on which societies should be heard are too complex for any one society to cope with.
22. In recent years there has been a tendency toward an increasing number of interdisciplinary symposia and conferences. This in itself has limitations, because the 'same old faces' turn up.
23. Societies should actively lend a hand to groups of concerned citizens.
24. The increasing number of non-science volunteer bodies, and government-appointed advisory groups is a reflection on the failure of societies to have a voice.
25. Some societies question the reason for their existence, particularly if they are affiliated with a larger, coordinating organization.
26. As a whole, Canadian societies have not had a sufficient involvement with international organizations.
27. Societies should play an active role in advising governments on appointments to both permanent posts and advisory committees.
28. A factor contributing to the ineffectiveness of Canadian societies is that too many Canadian scientists have had too restricted professional careers (i.e. only government, or university or industry)

Again you are reminded that the writer does not necessarily support all the foregoing statements. Comments anyone?

A.S. West, Study Leader

SCITEC is the Association of the Scientific, Engineering and Technological Community of Canada. The address is c/o Science Council of Canada, 150 Kent Street, 7th Floor, Ottawa K1P5P4.

POSITIONS VACANT

THE UNIVERSITY OF MICHIGAN, the Thomas Henry Simpson Memorial
Institute for Medical Research, Ann Arbor, Michigan 48104.

Post-doctoral research associate required to join the group
led by Dr. David Aminoff as of December 1, 1971. Below is a brief
outline of the activities of this group:

1) Immunochemistry. Isolation and purification of the glyco-
proteins with human blood group activity from various human and animal
sources. Structure studies of the carbohydrate moiety to correlate
structure with serological specificity.

2) Glycosidases. The A, B, O, Le^a and Le^b blood group specific
substances are glycoproteins and the serological specificity is determined
by the terminal non-reducing sugar at the end of the oligosaccharide chain.
We are in the process of isolating and purifying several specific
glycosidases that can be used to remove the terminal non-reducing sugar
and thereby change the blood group specificity. Used sequentially,
the purified glycosidases can be utilized in structural studies as well
as providing suitable acceptors for the biosynthetic experiments.

3) Biosynthetic Studies. A possible pathway for the biosynthesis
of the glycoproteins with blood group activity has been proposed, based
on the known chemical structures and compatible with the genetics of the
blood group substances. The objective is to establish experimentally
the biosynthetic pathway and to determine the nature and "site" of the
genetic control involved.

4) Blood Groups as Genetic Markers. The glycoproteins with
blood group activity are not simple gene products but rather the outcome
of the interplay of many genes. As such, there is a genetic basis for
the observed correlation between the blood group phenotype and many
diseases and even normal physiological activities. The blood group
studies, therefore, provide a useful handle and another parameter to
study the physiology or pathology of a given system.

5) Carbohydrate Components of Gamma Globulin. Biochemical
aspects of the carbohydrate components of gamma globulin, and the role
of the carbohydrate moiety on the biological properties of antibodies.

6) Use of Lectins. As specific immunological reagents to probe
cell surface antigens.

7) Red Cell Survival. Studies to determine the viability of
enzymatically modified red cells.

Candidates are requested to contact Dr. David Aminoff, The University
of Michigan, the Thomas Henry Simpson Memorial Institute for Medical Research,
Ann Arbor, Michigan 48104.

Application with information concerning age, main interests, present position, research projects and major contributions to the field should be sent as soon as possible and not later than 25th January 1972 to:

Dr. J.B. Natvig
Attention: Genes and Antibodies
Institute of Immunology and Rheumatology
Rikshospitalet University Hospital, Oslo 1, Norway

The final allocation of places will be completed by February 10th. The cost of the hotel accommodation at Gausdal will be approximately N.Kr. 70.- (\$10.00) per day all inclusive.

9-14 APRIL 1972 - ATLANTIC CITY

The AAI meeting with the Federation of American Societies for Experimental Biology will be held in Atlantic City on April 9 to 14, 1972. Registration will open Sunday, April 9; scientific sessions and exhibits are scheduled for Monday through Friday. AAI headquarters will be at the Shelburne Hotel.

19-20 MAY, 1972, POZNAN, POLAND

The 14th Immunology Meeting organized by the Polish Academy of Sciences will be held in Poznan on 19-20 May, 1972.

The Meeting will deal with problems of cell-mediated immunity. On the second day a Conference on Blast Transformation of Lymphocytes will be arranged. The papers and discussions on the first day will be multilingual. English being used on the second day.

Immunologists and scientists working in allied fields wishing to participate in the Meeting should register before March 1st. Deadline for submission of titles of papers and short summaries is February 1, 1972.

Correspondence concerning participation in the Meeting should be addressed to the Organizing Committee, Department of Immunology, Medical School, Poznan, Szkolna 8/12 (Dr. S. Mackiewicz), Poland.

12-15 JUNE 1972 - BUFFALO, NEW YORK, U.S.A.

The Third International Convocation on Immunology will be held in Buffalo, New York from June 12 to 15, 1972. The sessions will concentrate on the topic, "Specific Structural Features of Antibodies and of Antigen Recognition Sites." Organizers of the scientific program are Drs. David Pressman and Thomas B. Tomasi, Jr. Speakers from throughout the world have been invited to discuss aspects of this subject in depth. The meeting is sponsored by The Center for Immunology of the State University

More information can be obtained from the Congress secretariat:

Secretaria Geral
XIV Congresso Internacional de Hematologia
Rue Gabriel dos Santos, 443
Sao Paulo, 4, SP, Brazil

17-28 JULY 1972, LA JOLLA, CALIFORNIA

The Annual Survey Course in Immunology, sponsored by The American Association of Immunologists, to be held at The University of California at San Diego (UCSD), La Jolla, California.

Co-directors:

Elmer L. Becker, The University of Connecticut, Health Center, Farmington, Connecticut 06032; Dan H. Campbell, California Institute of Technology, Pasadena, California 91109; Stewart Sell, University of California, San Diego, La Jolla, California 92037.

Organizing Committees:

Admissions: Frank L. Adler, Chairman; Course Planning and Faculty: Stewart Sell, Chairman; Publicity: Peter A. Ward, Chairman.

Topics and Faculty:

R. Asofsky (Delayed hypersensitivity); A. Braude (Protective immunity); J. Fahey (Antibody function); M. Frank (Complement); K. Hellstrom (Tumor immunity); C. Henney (Antigen-antibody reactions); L. Hoyer (Immunohematology); J. Kettmann (Immune response); D. Marcus (Techniques); R. Orange (Anaphylactic reactions); R. Reisfeld (Transplantation); F. Rosen (Immune deficiency diseases); N. Talal (Immune complex diseases); J. Vaughan (Autoallergic reactions); W. Weigle (Immunologic unresponsiveness); Pending (Antibody structure).

The course:

Topics will cover the broad spectrum of present-day knowledge of immunochemistry and immunobiology. Basic fundamental concepts will be given for each subject.

The Faculty will consist of specialists in each field and, in general, those with teaching experience. Some of the Faculty will remain in residence for all or most of the two-week period. All members of the teaching staff will remain for at least one day following their lectures in order to be available for informal discussion. Mornings and evenings will be devoted to lectures with some time for questions raised by students to clarify specific points. Afternoons will be free time for students for the purpose of study and informal discussion with each other and with the faculty. There will be no formal sessions from Saturday noon until Monday morning.