
Promoting Innovation: 1950s - 2005

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The last 50 years have witnessed considerable evolution in the attention paid by the Federal Government to research. During this period, however, the financial support has not always been consistent and this lack of a consistent commitment has resulted in lost opportunities for Canada to compete effectively in the world of ideas, and thus advance this country both socially and economically.

What I would like to do in this “brief” is to review the changes that I, and a number of colleagues of my generation, have observed during our period in scientific research and to communicate some of the advances and frustrations that we have noted in attempting to compete in a global environment. These experiences are meant to form a backdrop for the creation of an organization that is designed to communicate the benefits of research to “decision-makers” for the advancement of Canada’s productivity.

EARLY DAYS

During the 1950’s when many of us were in graduate school, only a small number of organizations, such as the Banting Foundation, provided fellowships for graduate training. Government departments, including the Defence Research Board, granted funds for particular projects but the involvement of the Federal Government in underwriting university research was small. Often, Canadian researchers depended upon the generosity of the N.I.H. in the U.S. to fund their investigations adequately. Obtaining support for post-doctoral studies in Canada was also extremely difficult if one depended on a Canadian source. The major agency at that time was the Canada Council that accepted applications from individuals in both Arts and Science disciplines. The success rate was low, and again those of us in the life sciences applied to American organizations such as the Damon Runyon Fund and the Jane Coffin Childs

Foundation. Success with Damon Runyon allowed me, for example, to study for three years in Europe.

Returning to Canada in 1960, however, was disappointing. Few exciting opportunities were available for individuals with advanced training, especially in molecular biology, which was just emerging as a new discipline. Many of us consequently gravitated to the U.S., where recruitment of trained investigators was active and support for research could be obtained from the NIH or NSF and a number of non-governmental agencies.

CHANGING ATTITUDES

With the migration of many investigators from Canada to find “greener pastures” where research funding was available, concern started to emerge in our Federal Government. This was evidenced by the appearance of governmental representatives sent to the U.S. to interview expatriate Canadian scientists. While at St. Jude Children’s Research Hospital, I spoke with one delegate and was asked the reasons for my departure from Canada. I suspect that my responses concerning the lack of research support in Canada were similar to others who received such visits.

The year 1960 was characterized by the formation of the Medical Research Council (MRC), with a modest budget of \$ 2.3 million. In 1978 the Natural Sciences and Engineering Research Council (NSERC) was created with an initial budget of \$112 million. Prior to 1978, NSERC-type awards were provided by the National Research Council (NRC). Growth of the MRC budget during the 1960s, and the rise in political awareness that research should be better supported, encouraged many expatriates to return to Canada. My own research group at that time of four post-docs, a graduate student and technician migrated from St. Jude Hospital in Memphis, Tennessee to the Medical School being established at Memorial

University, Newfoundland, to set up a lab in Molecular Biology, with assurance that our initial financial needs would be met by funds provided by the Federal Government. A decade earlier it is unlikely that this could have occurred. Since then, research scientists have observed a rollercoaster ride of peaks and valleys in the level of funding provided by Parliament. The increasing investment in the research enterprise consequently attracted the attention of politicians, and the requirement that the scientific community liaise with “decision-makers” if researchers were to expect sustained and increased support.

THE ROLE OF THE CANADIAN FEDERATION OF BIOLOGICAL SOCIETIES (CFBS)

With its inception in 1957, CFBS initially played an important role in bringing together the various disciplines in the Biological Sciences. Its major focus was the annual scientific meeting, which was designed to act as a vehicle for better interaction amongst researchers. The model for this organization was the Federation of American Societies of Experimental Biology (FASEB).

With the emerging emphasis on research in this country, expansion of Canadian universities, and growth in the number of life science investigators, the demand for funding increased dramatically. Consequently, individual CFBS members started to act as advocates for greater Federal funding. In addition, members of the research community began letter-writing campaigns to MPs to communicate the benefits of research. The need for a central office to interact with the government in Ottawa became a necessity. Subsequently, in 1985 CFBS moved its office from Saskatchewan to Ottawa, and the CFBS Executive appointed an Executive Director with the role of interacting with “decision-makers” (parliamentarians, senior government officials and granting agencies).

In the Life Science community, questions are often heard concerning the need for CFBS to be involved in advocacy. The underlying reason relates to the background of most “decision-makers”. In Parliament the vast majority of MPs are

NOT scientists. They have expertise in other areas. Many other groups with different requests are vying for the attention of “decision-makers” for financial support. CFBS, therefore, has an important role to play in informing parliamentarians and other “decision-makers” about how investing in life science research can help Canada in moving forward both socially and economically. Since 1985 this is what CFBS has tried to accomplish. The recent election, with the large number of new MPs, provides CFBS with a challenging opportunity to ensure that its message is conveyed. Our recently developed seminar program with the Parliamentary Library will allow CFBS to inform MPs about life science issues that may appear in legislation.

CFBS REDEFINES ITSELF

I. Advocacy and Innovation

In the 1990s two major complaints were heard regarding CFBS. One related to the Annual Meeting, which will be discussed below, and the second related to advocacy. There was a perception that CFBS interests were “too biomedical” and thus excluded important members of the life sciences community. Consequently, efforts were made to be more effective in our communication to the membership. To overcome this misconception, CFBS developed an updated website where advocacy activities and “briefs” are posted, and also issued communications to our members called “CFBS Alerts”.

As a prelude to meeting “decision-makers”, issues are defined and a “brief” prepared in response to requests from the societies and discussions with colleagues in Ottawa. Efforts are made to ensure that the issues represent the spectrum of concerns voiced by our membership. For example over the past several years the following were items of interest to the broad life sciences community: 1. The need for highly qualified personnel. 2. Support for “indirect costs of research”. 3. Promotion of partnerships between Federal/Provincial Governments for a strategy regarding funding for post-secondary education. 4. Sustained financial support for the Granting Councils. CFBS supported the establish-

ment of: i) CIHR, ii) Canadian Academics of Science and iii) the position of Science Advisor to the Prime Minister.

To ensure that topics of concern to individual groups/societies are discussed with “decision-makers”, special visits are organized. Most of our discussions with parliamentarians and senior personnel in government fall under the broad topics outlined in the CFBS “brief” and/or in the “brief” prepared by individual societies. Over the past 7 years the number of visits to parliamentarians and senior government officials has grown. 1. Each May, CFBS organizes visits for both members of the CFBS Societies and for the Canadian Council of University Biology Chairs (CCUBC) with members of parliament, officials of granting agencies and particular government departments. This represents between 15 and 20 visits. 2. By request, CFBS also organizes similar visits for particular Societies of CFBS. The Canadian Society of Zoologists (CSZ) has taken advantage of this opportunity, and CFBS sets up meetings with individuals of special interest to them. 3. As a member of the Canadian Consortium for Research (CCR), CFBS serves on its steering committee and participates in a series of visits throughout the year promoting the concerns of life scientists. 4. Each autumn, CFBS and members of the Chemistry and Physics Community spend two days with decision-makers to encourage government to increase its investment in innovation, and to make suggestions to assist the process. 5. To enhance its ability to get its message to “decision-makers”, CFBS continues to be a member of the Partnership Group in Science and Engineering (PAGSE). Each year, PAGSE presents a “brief” to the Finance Committee containing issues it believes will enhance Canada’s position as an innovative society. Many of these issues are those supported by our membership. 6. The CFBS Executive Director is in conversation with the Executive of Research Canada (an alliance for health discovery) to ensure that our membership with that organization will be mutually beneficial. CFBS, we believe, has played an important role in voicing the concerns of the life sciences constituency, with many of the issues that we have promoted being addressed.

2. CFBS Annual Meeting

A chronic complaint, in the past, from the society membership had been the character of the Annual Scientific Meeting. While the annual assembly was useful in bringing researchers together in a social sense, it failed, over time, to meet the scientific needs of the members attending. The quality of the presentations was not in question. However, given the move of research to become more focused, and the large number of scientific conferences devoted to more focused topics, CFBS turned to a thematic format starting with the 2000 meeting. This approach, and the increase in the funds that CFBS allocated to attracting high quality speakers, have resulted in conferences that provide greater depth in subject matter than previous annual meetings. The success of this approach has been variable.

Another approach is to model the CFBS scientific conference after the Keystone Meetings in the US, where a series of Canadian conferences would be held each year involving various life science societies. Since 2004, CFBS had been encouraging member and non member societies to be involved in such a meeting format. Societies meeting under that format will benefit from CFBS’ office experience and capabilities in meeting organization, while the society would be responsible for the program organization. This format would allow Canadian life science research to be highlighted and interdisciplinary information exchanged. A form of this has been implemented by CSBMCB, and is also being done this year by CFBS in Saskatoon with the Canadian Light Source Users. Efforts designed to introduce this approach on a larger scale have not yet been accepted.

3. Services to Societies

After a period of time, organizations need to re-examine their role. Over the past seven years CFBS has attempted to assess how it can better serve the life science community. This was done in part by initiating an annual strategic planning session to identify problems and determine solutions. Since 1985, many changes have occurred in our community that affect the life of researchers and

the ability of CFBS to function effectively. The following are some of the important ones: 1. Reduced university operating budgets. 2. A smaller number of university life science faculty members. 3. Less time available to members of the life science community to spend in Society activities. 4. Decreasing membership in the life science Societies. 5. Increased number of life science conferences devoted to special topics.

Decreasing university operating budgets have resulted in a significant drop in university support staff. In the past CFBS, could rely on faculty members with access to secretarial help if they were involved in life science society activities. Elimination of such positions has meant that fewer faculty members have the backup support to devote to “extracurricular” activities. Coupled with fewer faculty members in many institutions and their increased workload, this has resulted in less time for volunteer organizations. CFBS had, therefore, to consider how it could “fill the gap”. Consequently, CFBS has developed contracts with several societies to act as a secretariat for a variety of functions previously handled by society executive. These contracts provide the opportunity for societies to obtain assistance in bookkeeping, website monitoring, maintaining a database of members, as well as help with individual society annual meetings.

CONCLUDING COMMENTS AND OBSERVATIONS

A major difficulty faced by many non-profit scientific organizations has been the drop in enrolment of new members. It would appear that new young investigators are not “joiners”. This may be characteristic not only of the scientific community, but also of a broader trend including involvement in the political process. Given the drop in interest by young people in the recent election, we will have to be inventive to ensure that our societies remain vibrant organizations.

What CFBS has attempted, therefore, over the past seven years, to provide services to the Life Science Community and to respond to issues of major importance to our membership. Given the

increased pressures on our members, CFBS, in addition to playing a role as the corporate memory, has attempted to serve as a secretariat for Societies that desire this service. Consequently, CSBMCB, CPS and CCUBC have signed service contracts with CFBS. These contracts improve links between the Societies and CFBS, and at the same time provide savings to the contract holders as well as producing additional income for CFBS. The CFBS website has also provided a link to job postings, again creating another service and producing income for the Federation. Introducing these services has helped the CFBS budget, without increasing membership fees which have not changed over the past decade.

The most important function that CFBS can provide remains its ability to act as a voice for life science research. While individual societies can meet with “decision-makers”, the message being delivered can often have greater impact when it comes from 9,000 researchers compared to a few hundred. CFBS is always on the look for new organizations with similar interest to form partnerships. CFBS has partnered with other organizations larger than itself, CCR and PAGSE, to ensure that its particular issues can be advanced in an even larger forum. The major role of CFBS, as representative of the life sciences, is to ensure that the life sciences community has a strong voice by seeing that a growing partnership evolves amongst Canadian researchers.

Over the past seven years, it has been satisfying to observe the changing response to our proposals. In our early visits to “decision-makers” we had to convince them that what we were promoting was in Canada’s best interests (and not “feathering our own nest”). In later years, the discussions became more of a partnership in which we attempted to articulate solutions to problems to help Parliament make Canada a more innovative society.

It is imperative to mention that CSBMCB is one of the initial societies that worked to create CFBS. What needs to be remembered is that CFBS is a creature created by the societies and it can only be effective when it is serving the needs of the societies. It is important, therefore, that societies

clearly articulate their needs and that CFBS responds effectively.

An issue that CFBS has had to deal with concerns how to develop its interaction with individual Societies. Each Society has a particular character and wishes to preserve its independence. Some societies were under the false perception that membership with CFBS would lead to the loss of their independence. CFBS has been sensitive to this concern and has tried to ensure that this does not happen. One example relates to the CFBS Annual Meeting and individual Society meetings. If a Society decides to participate in the CFBS program theme, then CFBS picks up the costs of the venue and invited speaker. If on the other hand a society that is a member of CFBS wishes to organize its own scientific meeting, CFBS will contribute to help defray the cost of a speaker. Improvements in the CFBS financial base would permit greater generosity.

An ongoing concern that many of us have had relates to the length of the tenure of Society Presidents. One year, we perceive, is too short. Only at the end of her/his term in office has the incumbent become aware of the major problems and can start to consider solutions. We are also aware that it is difficult to have individuals serve for more than one year. When Al Matheson was President of CSBMCB (then CBS), more than 20 years ago, attempts were made to change the President's term in office to two years. Unfortunately, this proposal was defeated. It may be time to reconsider this option.

Since this will be my last year as Executive Director of CFBS, the above is a summary of the last seven years. It has been challenging, often frustrating, but always interesting.

(I would like to acknowledge my colleague Ms. Wafaa Antonious, who helped in the editing of this article).