



Stimulus & Challenge

The voice of Dal Dental research



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A Love Affair!

Research is like a love affair; if you don't take it seriously, it's no fun; if you do take it seriously, it breaks your heart.

DWJ.

Heart Breaking

Four applications to the MRC from our faculty were turned down for the March competition. As yet we do not know why they failed to be funded. However, what we do know is that well over 50% of the the new MRC operating grant requests were rated in the 3-4 category (good to excellent) and only 26% were funded. This tells us that many grants which were rated as good to excellent did not get funded. In the major equipment grant competition the situation was even worse. Over 80 applications were reviewed and only about 5 were funded, due to most of the money earmarked for major equipment being redirected to the operating grant competition.

Free Trade

One of the recommendations of the MRC Strategic Plan is the need to put in place mechanisms to help Canadian investigators access international organizations for support. According to the MRC strategic plan report "The National Institutes of health in the USA has supported Canadian research judged to be excellent." It is also a fact that MRC has failed to support some Canadian

research judged to be excellent. This is not stated out of malice or a sense of frustration but merely to encourage those who were not successful. The fact is that there was nothing wrong with the quality of a very large number of MRC grant applications not funded in March 1993. It is also interesting to note that NIH have just announced a competition for two strategic areas of research. These areas are "Specialized Materials Science Research Centers"; and "In Utero Stem Cell Transplantation for Genetic Diseases." Although these two competitions are not open to foreigners, it is possible for US investigators to have non US collaborators. Thus Canadian researchers can collaborate in this programme with colleagues in the US. It could be time for some cross-boarder shopping.

It Breaks Your Heart

As if doing research is not difficult enough. Between 6:00 pm on Saturday 17th April and 9:00 am on Sunday April 18th the door to room #3110 of the Biomaterials research laboratory on the third floor was smashed by someone who was present in the Dental Building at the time. The burglary of the Biomaterials research laboratory is a major setback for the research programme in biomaterials. The disruption of the research and the loss of valuable data is more than just a crime. The thief or thieves took what looked like a regular

computer and printer, but it was in fact, part of a sophisticated particle size analysis system. The major expense is in the special cards and chips which the system contained in order to acquire, manipulate and store the research data. None of this software in the computer would be any value to the criminal(s) who stole the equipment. The equipment had been purchased just over 18 months ago for over \$77,000. The replacement of the part of the system which the thieves removed has been estimated by the manufacturer at \$40,000. We cannot put a price on the lost research time or the data which they stole. According to the manufacturer of the equipment there are only 22 such units in the world.

Insight

Historian Henry Adams used the second law of thermodynamics to show how civilizations disintegrate over time. Einstein, in formulating the theory of relativity, was influenced by philosopher David Hume. The lesson that we can learn is that we should pay attention to other disciplines when we review our own research area. Other theories and concepts when applied to our research may give new insight and understanding. This is a strong argument for multidisciplinary research in which we interact with colleagues having very different backgrounds.

Research Hall of Fame

The following students are recipients of MRC Farquharson Summer Research Scholarships for 1993.

Ian McDougall (2nd yr).
James Potvin (3rd yr).
Gordon Taylor (1st yr).
Christopher Zed (3rd yr).

These students will be working on designated projects approved by the Research Development Committee. The Dental Research News congratulates them on their success. However, we must also spare a kind thought for the students who were not successful on this occasion. MRC stipulates that the awards are only open to students in the top 20% of their class. The purpose of the MRC Farquharson Summer Undergraduate Research Scholarships is to provide a sound research educational experience for the students and encourage our undergraduates as future clinicians to consider careers in medical or dental research. Priority is given in selecting students with a proven academic ability as well as a perceived aptitude for research. The future applied scientists who will make up the profession of dentistry must seek out new knowledge in order to better serve mankind and contribute further to the body of our general knowledge.

The four successful dental students, from 1993 will join a very long list of graduates and students who have participated successfully in our dental research programmes over a period of 17 years from 1977 to 1993. The following 48 individuals have been recipients of MRC summer student scholarship awards during this period.

Allen, James Stuart
Atkinson, Paul
Beaton, Eric
Bezanson, Ric H.
Bowser, Debi
Brown, (Fred) A. M.
Burke, Joanne
Chiarot, Marco
Clinton, Bob
Coffin, Jane M.
Cullinan, Janet
Dobson, Cheryl
Duke, Sheila
Fleming, W. Blair
Furlong, Karen
Gordon, Sara
Harvey, Andrew T.
Hass, Dieter
Holden, Richard
Johnson, Cathy L.
Johnson, Pat
Johnston, Donald E.
Lawton, Maureen E.
Lloyd, Ian
Logue, Terrie
MacGregor, Robert
Mader, Marlene E.
McDonald, Jane
McDougall, Ian
McIntosh, John
McKenna, Lorne R.
Migas, Christo
Mitton, Greg
Ngan, Kenneth
Peacocke, Larry E.
Potvin, James
Power, Neil
Pyke, Susan
Raftus, Richard
Ross, Ian
Russell, Kathleen
Taylor, Gordon
Trainor, Mary Patty
Verpoorte, Mark
Winslow, Deborah C.
Zakariasen, Kristin A.
Zed, Christopher
Zwicker, Peter

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New Knowledge

All students are well aware that the new knowledge which is required in order for the profession of dentistry to progress, to make advances and improvements can only be uncovered by painstaking research over many years. The

development of our dental research base at Dalhousie has become a major theme of our mission over the past 10 years. Many individuals have participated in this exciting development. In addition to the 48 individuals listed on this page who have been recipients of MRC Summer Research Scholarship grants, an additional number have also been supported from various other sources to participate in summer research projects working together with faculty members. A further 15 students have been recipients of the prestigious "Proctor and Gamble or Warner-Lambert Award" to attend the Annual Students Conference on research. A significant number of Dalhousie University dental undergraduate students have also presented papers at international research meetings over this period.

The funding from MRC for Research Scholarship awards to our dental students has amounted to over \$200,000 (in equivalent 1993 dollars) during the past 17 years. The support provided by Proctor and Gamble and Warner-Lambert to students attending the Students Annual Research Conference during the past 15 years is equivalent to about \$45,000 in 1993 dollars. We believe that these funds have been well spent.

Pure Reason

"Real life is, to most men, a long second-best, a perpetual compromise between the ideal and the possible; but the world of pure reason knows no compromise, no practical limitations, no barrier to the creative activity embodying in splendid edifices the passionate aspiration after the perfect from which all great work springs".

Bertrand Russell

Investment in the Future

The funds provided to support research opportunities for our undergraduate students are an investment in the future. The research experience gained by our undergraduate students has significantly enriched their professional careers. Many of these students have gone on to graduate school, or have undertaken part time teaching appointments in our faculty. For those who took the important path of general private practice, the research experience has provided an enrichment and deeper appreciation of scientific dentistry for those who have been fortunate and privileged to participate in research studies.

As dental ungraduate students at Dalhousie University many have been able to participate in the dynamic period of the research history in our faculty, we are proud of the contribution that they have made. In order to facilitate the continued participation of students in our research programmes we are going to initiate a special "Faculty Research Development Fund for Students." This fund will be devoted exclusively to the support of students in the form of summer employment as research assistants and to support a selected number to attend a research meeting to present the results of this work. The involvement of our undergraduates in research allows them to capture and experience the wide scope and scale of the benefits of research.

Drive for Research Funds

The Research Development Office is currently planning and preparing for the development of a drive to raise funds in aid of our research within the Faculty. In our research programme excellence is the key word. We

recognize that the confidence of the dental profession and the public is based upon assurance that the best possible international standards for research are the focus of our research programme.

Our Dalhousie research programme aims to provide benefits for dental health science research for the community. Any funds generated to support our undergraduate students involvement in our research programme will increase our international competitive advantage. The funds will help establish interdisciplinary co-operation. Above all the funds will provide seed money which will help our faculty increase it's share of research funding from external agencies. There is a need for our faculty to be able to fulfil the mandate articulated in the mission statement of the University which is dedicated to the creation of new knowledge.

The future of our faculty must include the evaluation of discoveries, and the promotion and transfer of new knowledge for the dental profession. The Faculty of Dentistry at Dalhousie is a resource for the profession, the general public, the nation as well as the world at large. We believe that our faculty members and students at Dalhousie represent a thriving, hungry, research community capable of performing excellent research way above the present levels which we have been able to achieve. With further financial help we will be able to achieve this. In research there is never enough money to go around. The research careers of many of our faculty members are being held back by lack of funding. Tragically the lack of funding also limits the possibilities for our bright intelligent undergraduate students to experience the same rich excitement of

discovery which many former dental students have achieved. Dalhousie Dental Faculty has achieved top status in terms of the numbers of research papers presented at international meetings during 1992-93. It is hard to believe that Dalhousie was in first place way ahead of Toronto, UBC, Manitoba. Fifteen years ago we were ranked ninth out of the ten Canadian faculties. We do need to ensure that Dalhousie can sustain the current level of research productivity.

We hope that former undergraduate dental students will look back with pride and pleasure on their time spent at Dalhousie, especially the research experience they may have gained.

New Research Path

"Two roads diverged in a wood, and I took the one less traveled by, and that has made all the difference."

Robert Frost.

Not Such a Good Plan

"When you come to a fork in the road, take it."

Yogi Berra.

Microminiaturization

We all know that Nano-technology is said to be the emerging science. That's no small accomplishment. But surely the research funds for science don't have to follow suite.

DWJ



SMILE

Research Definition

"A two sample 't' test was used" means, the third rat got away.