



farewell

Dental

The voice of Dal Dental research

JUNE 1995

Research News

VOLUME IX, NUMBER 6.

Research Development Office, Phone: (902) 494-1675
FAX (902) 494-1634 E-Mail DWJONES@AC.DAL.CA

Clinical Trials Atlantic Corporation

Following the successful Clinical Research Day held on the 12th April and the presentation by Peter Thompson. A number of enquiries have been made about the Clinical Trials Atlantic Corporation (CTAC). The CTAC is a non-profit organization established to provide marketing and scientific resources needed to attract greater levels of funding for clinical trial research in Atlantic Canada. One of the main objectives of the CTAC is to increase the percentage of research dollars from the pharmaceutical industry which are spent in Atlantic Canada.

It should be noted that Bill C91 which was passed in 1993 eliminated compulsory licensing of pharmaceutical products and in effect extends the patent protection to 10 years.

At the present time less than 2% of the research dollars from the pharmaceutical industry are spent in Atlantic Canada, yet the region has some 8% of the population of Canada. In 1991 90% of the research funds from the pharmaceutical industry were spent in Ontario and Quebec. In 1991 the pharmaceutical industry provided some \$376 million in research funding. If the CTAC could only increase the share of these funds for Atlantic Canada to 10% this would provide an additional \$34 million in clinical

research for the region. This would almost double the current research funding obtained for all of the faculty at Dalhousie University from external sources. It is estimated that 50% of the research funds spent by the pharmaceutical industry are on clinical trials. During a period of three years the Canadian pharmaceutical industry spent \$480 million on Phase I, II and II clinical trials.

The eight member institutions of the CTAC are; the Faculty of Medicine, Dalhousie University, Victoria General Hospital, Izaak Walton Killam Children's Hospital, Camp Hill Medical Centre, Region 2 Hospital Corporation, St. John New Brunswick, the Faculty of Medicine, Memorial University, and the General Hospital, St. John's Newfoundland and UPEI Atlantic Veterinary College. The Faculty of Dentistry made application for membership of CTAC in February 1995, this application will be considered by the Board of Directors in June 1995. The Faculty of Dentistry has much to offer, with the largest dental clinic east of Quebec. A clinic that has up to 25,000 patient visits a year. With a vigorous CTAC effort the future looks bright for Atlantic Canada since according to the Pharmaceutical Manufacturers Association of Canada it is estimated that research expenditures in the

Atlantic region could reach a total of \$49 million during the next four years and may approach \$73 million between 1997 and the year 2002. This is a far cry from the \$12 million which was spent in the region between 1988 and 1991. This offers an unprecedented opportunity for the Clinical Research Unit in the Faculty of Dentistry to make significant strides to become well and truly established.

=====

Human Integrity

"Society and science share a dynamic, evolving relationship. Scientific inquiry often yields new knowledge that promotes health, saves lives and so furthers the best traditions of medicine. The history of human experimentation and the rise of modern bioethics, however, pointedly remind us that the process of advancing medical knowledge must conform to values and principles aimed at promoting the integrity of the human person. In doing so, the process preserves and advances our collective humanity."

NCBHR study of the function of Ethics Boards 1995.

Restoring Confidence

"Art is meant to Disturb, Science Reassures". Georges Braque

Students Selected for Summer Research Positions

Fourteen students have been selected for summer research positions. Three students were selected as recipients of MRC Farquharson Summer Research Scholarships for 1995. In addition Darryl Smith was selected as the recipient of the CDA Wrigley Research Award to work with Dr. Kathy Russell. The projects were approved by the Research Development Committee in April. The following provides a complete listing of research projects and assigned students.

Joel Powell, "Isolation and Identification of Environmental Sensor Genes From *Streptococcus Mutans*." Faculty Supervisor Dr. S. Lee, Department of Oral Biology.

Paul McLaughlin, "Measuring Base Metal Alloy Percent Porcelain Retention by the Pulse Potentiostatic Method." Primary Faculty Supervisor, Dr. E. J. Sutow, Div. Biomaterials.

Vivian Ke, "Chemical and Physical Properties of Experimental Bioactive Glasses Synthesized by Spray-Drying." Drs. Rizkalla and Jones.

Darryl Smith, "Outcome Assessment of Orthodontic Treatment and Education Within an Undergraduate Orthodontic Teaching Programme." Primary Faculty Supervisor, Dr. K. Russell, Div. of Orthodontics.

Todd Dakin, "TM Joint Loading as a Result of Occlusal Force." and "Spheno-Occipital Flexure and its Relation to Malocclusion in Cleft Lip/Palate and non-Cleft Patients. Drs. Precious, Gooday & Morrison."

John Withrow, "Antibody-Targeted Liposomes Against Oral Pathogens." Dr. W. C. Foong.

Neena Sidhu, "Survey of Dental Community on How Non-Carious Cervical Lesions are Identified, Classified and Treated. and Retrospective Study of Patients Treated in the Dalhousie Dental Clinic to provide Insight into Epidemiological Factors Associated with Non-Carious Cervical Lesions." Drs. Lyttle and Smith.

Kelly Crawford, "Analysis of Foundation Sciences in Clinical Practice". Case Evaluations and Curriculum Outcomes Assessment. Drs. Lyttle & Foong.

Chris Uhlman, "The Effect of Low Level CO₂ Laser Radiation of Smooth Surface Enamel Surrounding Amalgam and Glass Ionomer Restorations." Drs. Boran, MacDonald and Price.

Amrit Singh, "Establish the Relative Inhibition Activity of Chlorhexidine and Tetracycline on Selected Bacteria Commonly Found in HIV-Periodontitis Infections." Drs. Cunningham, Foong, Lee and Lyttle.

Rick Dickinson, "Development of Improved Posterior (SiO₂-Al₂O₃)/(SiO₂-ZrO₂-Y₂O₃)/Resin Composite Materials." Drs. Jones and Rizkalla

Greg Thistle, "Validation of a Laser Aiming Device for Radiographic Central Ray Realignment." Drs. Chaytor, K. Russell and L. Russell.

Clare Champoux, "Oral Health Survey—Residents of Mount St. Vincent

Motherhouse, Outcomes Assessment." Drs. MacDonald, MacInnis, Ismail and Foong.

Robyn Killen, "Student's learning styles study." Professors Neish & Mitchell.

Three non research summer positions were also awarded. **Kent Orlando**, Anatomy preparation of teaching material. **Glenn Anderson and Paul Miller**, Dental Clinic emergency patient care.

This year we had a total of 38 students who applied for the 17 summer positions available. The recommendations were made by the Research Development Committee following a review of the students' ranking of the individual projects and the ranking of the students by faculty supervisors. As far as possible the aim was to give Faculty members their first choice of the student of their choice and the students the first choice of the project of their choice. The committee also took into consideration the resume of the students. It is unfortunate that we had a total of 21 students who were not successful in obtaining a summer research position. It is indeed distressing that we were unable to support many more of our excellent students in summer research positions.

Dentures and Discs

Did you know that many of your CD's in future will be made from polymethyl methacrylate. Yes the very same material used in dentistry as a denture base which is the same material used as bone cement in orthopedics. PMMA discs have a structure which largely prevents birefringence as a potential source of disturbance during sound transmission. The discs are coated in 2.5 seconds with a thin highly reflective aluminium coating. Previously CD discs have been constructed from polycarbonate. The Polycarbonate polymer was once tried in the early 1950 and 1960's as a possible denture base material, however, it was abandoned in favour of polymethyl methacrylate.

NCBHR Report

A copy of the 1995 report of the National Council on Bioethics in Human Research (NCBHR) is available for review by Faculty members. The Data contained in the three year study were compiled by the NCBHR Working Group on Evaluation following site visits to university institutions. If you wish to review this please contact Derek Jones.

Clinical Research

"The purpose of biomedical research involving human subjects must be to improve diagnostic, therapeutic and prophylactic procedures and the understanding of the aetiology and pathogenesis of disease."

"In research on man, the interest of science and society should never take precedence over considerations relating to the wellbeing of the subject."

World Medical Association Declaration of Helsinki

Experimentation and Innovation

In the month that we say farewell to our President Dr. Howard Clark, it is worth quoting from one of his early statements. "Good teaching involves experimentation and innovation, systematic and careful evaluation of the experiment and the development of the same air of excitement and innovation about the teaching of a discipline as there is about original research in that discipline. Good teaching and research should complement each other." President Howard Clark, Dal. News Jan 1988.

Industry, Academia, and Government

"The discoveries of the laboratory must be carried to the bedside, and the development of new drugs, devices, and diagnostic tests needs to be done in

partnership with industry. As in any new venture, the implementation has uncovered some real or perceived problems. but those difficulties are not a reason to walk away from a principle of great social value; they provide an impetus to develop carefully crafted guidelines to help industry, academia, and government work together for the right reasons."

Dr. Bernadine Healy.

A Sad Farewell

This 87th issue of the Dental Research News (June, 1995, Volume IX, Number 6) will be the last to be published in the present form. The total number of pages since the very first issue in September 1987 including this 87th issue is 634, in addition it should be noted that well over 400,000 words have been recorded in the Dental Research News during the past 8 years. In accordance with the Faculty policy put in place on 28th February 1995 which limited individuals holding more than one administrative position Derek Jones will be stepping down as Assistant Dean and will no longer be producing the monthly issue of the DRN. Best wishes and happy researching from all of the staff of the DRN in the Research Development Office, the editor, the word-processing clerk the copy writer and research reporter. Never have so many worked together so effectively and efficiently.

During the past seven years the Dental Research News has chronicled the fortunes and triumphs of research within our Faculty. A Dental Research

Development Office was set up, and the first Assistant Dean for Research was established in 1987 with a mandate to stimulate and facilitate research within the faculty. The last few years have seen a larger number of individuals engaged in research than ever before in the history of Dalhousie University's Faculty of Dentistry. Our members have presented a total of 266 papers at the IADR/AADR meetings from the first paper presented 27 years ago in 1968. During the past 7 years there has been a significant increase in the number of papers presented at international research meetings. A total of 215 papers have been presented since 1987 which represents over 80% of the total during the history of our Faculty. During this seven year period the faculty obtained its first MRC Development Grant, its first MRC Programme Grant, its first MRC University/Industry Grant, and its first University Industrial Chair. The total research funding brought in was in excess of \$3.3 million, over 80% of the total funding has been obtained during the past six years. It is very true that the number of papers presented at international meetings do not tell the complete story about the level and quality of research, any more than the number of research dollars which have been brought in. However, the number of papers presented each year and the level of research dollars do provide a very crude measure of the health of the research in our institution. Clearly as documented in the pages of the Dental Research News during the past 7 years the health of dental research at Dalhousie has been vigorous and beating with a strong heart.

Incomplete

"Neither science nor literature ever gives a complete account of nature or of life."

Jacob Bronowski.