

Dalhousie University

Dental Research News



Research Development Office
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"Montreal Bound"

The following 28 individuals will be off to Montreal in March to present papers at the IADR meeting.

STUDENTS: Bob Clinton, Janet Cullinan, Terry Foreman, Gary Martell, Susan Pyke, Wayne Ramier, Kathy Russell, Joanne Thomas, Peter Thomson and Mark Verpoorte.

FACULTY & STAFF: Mr. Joe Barron, Dr. Wai-Choong Foong, Dr. Bruce Graham, Mr. Gordon Hall, Dr. Ros Harrison, Dr. Barbara Harsanyi, Dr. Chris Hawkins, Dr. Gary Jackson, Mr. Jim Johnson, Dr. Derek Jones, Dr. Dan MacIntosh, Dr. Larry Peacocke, Dr. Richard Price, Dr. Amin Rizkalla, Dr. John Sterrett, Dr. Elliott Sutow, Ms. Wendy Tobin and Dr. Ken Zakariassen.

In addition Dr's John Eisner and Derek Jones are giving invited presentations in special symposia. A further five papers are also being presented by our Dalhousie Faculty at the AADS meeting in Montreal the week preceding the IADR. These papers are being presented by: Dr's Tom Boran, John Eisner, Bill MacInnis, Joe Murphy and 3rd year Dental student Donna Witter. In addition Professor Marny Fogay is a co-author on a further IADR paper. The students, staff, faculty and administration can feel justly proud of this excellent team effort which has resulted in the name of Dalhousie appearing on 36 papers being presented at the two important meetings.

"A CHRISTMAS PRESENT FROM BRIAN"

University researchers received a wonderful Christmas present from the government. First we had the announcement of the recommendations from the University Committee of the National Advisory Board on Science and Technology in which the funding to MRC, NSERC and SSHRC should be doubled in the next three years.

The Prime Minister is in fact the Chairman of this National Advisory Board on Science and Technology, so look out for some government action on this recommendation during the next year. The second item of good news was the announcement by the government of \$1.3 billion over a five year period to establish regional centres of excellence on university campuses.

The Faculty of Dentistry have been discussing with Assistant Vice-President Fournier the possibility of developing a National Centre involving Biomaterials as a joint project with at least one other institution. The specific details of the \$1.3 billion (\$260 million/year) have not yet been specified. It is not clear if this will be linked to the recommended doubling of budgets for the three government research funding agencies. However, what is clear is that the government have made a move to dramatically improve the level of funding of research in Canadian Universities. This will fulfill the promises made by the Prime Minister in the 1984 election that a new deal would be forthcoming for the development of research in Canada.

"Prejudice is a great time saver. It enables us to form opinions without bothering with facts".

"The future that we study and plan for begins today"
Chester.O.Fischer.

SIXTEEN YEARS OF IADR/AADR ABSTRACTS ?

A total of 85 papers will have been presented by Dalhousie faculty staff and students over a period of 17 years. One third of these papers have been submitted to the meeting in 1988 for the Montreal IADR. The following details show the number of papers presented each year by Dalhousie at IADR or AADR meetings. Since 1975 we have not failed to present at least one paper at a meeting.

Table.1.

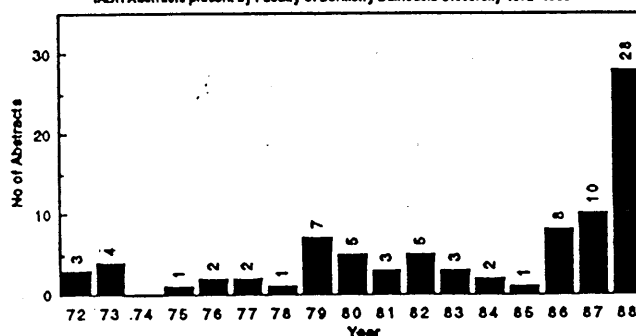
Dalhousie IADR/AADR Abstracts.

1972.....3.	1981.....3
1973.....4.	1982.....5
1974.....0.	1983.....3
1975.....1.	1984.....2
1976.....2.	1985.....1
1977.....2.	1986.....8
1978.....1.	1987.....10
1979.....7.	1988.....28
1980.....5.	1989.....??

Congratulations are due to Dr.Barbara Harsanyi she has the longest history in our faculty for presenting papers for Dalhousie at IADR/AADR meetings. Barbara will be presenting a paper at this years meeting in Montreal, and she was presenting a paper in 1972 at the IADR meeting with Dr's Angelopoulos and Gourley.

In the nine years from 1972 to 1981 a total of 28 papers were presented by our faculty we have thus done nine years work in the past twelve months in terms of research effort. In the five years from 1982 to 1987 we presented 29 papers one more than we will be presenting in 1988. If we can present at least 15 papers at the next meeting(Dublin) we will bring the total of Dalhousie papers presented at these international meetings in a period of 18 years to 100. Lets go for it!. After all our average over the past three years is just over 15 papers a year.

IADR Abstracts present by Faculty of Dentistry Dalhousie University 1972 -1988



Dental Materials Group Abstracts 1984-88

The number of abstracts in the Dental Materials Group in Montreal will be an all time record of 394. The following table shows a summary of the number of accepted abstracts in this section over the past six years.

Table.2.

DMG IADR/AADR ABSTRACTS

Year	Location	Oral	Poster	Total
1988	IADR Montreal	198	196	394
1987	IADR Chicago	111	219	330
1986	IADR The Hague	107	85	192
1986	AADR Washington	149	139	288
1985	IADR Las Vegas	141	168	309
1984	IADR Dallas	106	134	240
<u>Grand Total 1984-1988 ...</u>		<u>812</u>	<u>941</u>	<u>1753</u>

However, perhaps one of the most startling statistics is the number of rejects, for the 1987 Chicago meeting it was 16 (4.85%). In contrast for the 1988 Montreal meeting it is 52 (13.20%).

In the interpretation of the total number of abstracts it should be recognized that 1986 was a year in which the IADR and AADR were held separately. Next year will see the IADR and AADR meetings being held separately again. The meetings will take place in San Francisco in March 1989 (AADR) and Dublin in June 1989 for the IADR.

"Those who make the worst of their time are the first to complain of its shortness"

Jean De La Bruyere.

"It is better to understand a little than to misunderstand a lot".

Anatole France.

The 1988 IADR Programme

Following the publication of the last "DENTAL RESEARCH NEWS" a number of individuals have requested details of the total number of abstracts being presented as oral or poster in the various categories at the Montreal meeting. These details of the programme are presented in Table.3.

Table.3.
Montreal Programme 1988.

Area	Oral	Poster	Total
Dental Materials.....	198	196	394
Periodontics.....	206	170	376
Microbiol/Immunol.....	90	108	198
Mineralized Tissue.....	64	112	176
Cranio Biology.....	78	79	157
Cariology.....	71	77	148
Prosthodontics.....	64	68	132
Behavioral Science.....	54	46	100
Pharma/Therap/Toxicol..	52	49	101
Experimental Pathol....	44	46	90
Neuro-Science.....	50	37	87
Pulp Biology.....	44	39	83
Salivary Research.....	39	34	73
Implantology.....	42	31	73
Oral Surgery.....	30	39	69
Diagnostic Systems.....	31	17	48
Health Services.....	11	20	31
Geriatric Dentistry....	18	8	26

In terms of programming each oral presentation takes 15 minutes, we have a maximum of 11 oral presentations in any one session of two and three quarter hours. For example at the 1987 Chicago meeting last year on Thursday morning we had 13 oral sessions of 143 papers being presented simultaneously between 8.0 am. and 10.45 am. This represents 1.15 minutes per paper. In the last part of the morning between 10.45 and 12.15, 308 posters were simultaneously presented. This represents 0.29 minutes per paper. In other words the programming committee were able to include an extra 230 papers in this time slot of 90 minutes by using the poster mode.

A matter of Taste?

Local anesthetics applied to the surface of the tongue abolish both the sensation of taste and common sensibility. Bitter is always the most susceptible quality among the taste sensations to the action of local anesthetics; the subsequent order of decreasing susceptibility is then usually salty>sour>sweet.

"Cead Mile Failte"

The Irish Division of IADR will be wishing us a hundred thousand welcomes to the 67th annual session of the IADR in 1989. The scientific programme will be held in Trinity College Dublin which was founded in 1592. Trinity College occupies a site of some 37 acres and its buildings, which date from the early 18th century, are set in attractive parkland and gardens. The College is situated in the heart of Dublin, Ireland's capital city. Dublin is a city of fine Georgian buildings, excellent stores and shops, and of course "PUBS". In addition the city also offers many fine restaurants, museums, theatres and antique shops. Dublin is also within easy reach of coastal and mountain scenery of unusual beauty and interest.

The IADR Dublin meeting will hold the oral scientific sessions in the Arts Building of Trinity College and the poster sessions will be held in the magnificent Dining Hall of the College. The Scientific programme will commence on Thursday 29th June 1989 and finish on Saturday 1st July 1989. A State Reception will be held on Thursday 29th of June in the Royal Hospital of Kilmainham, one of Dublin's finest public buildings. On Friday 30th June traditional Irish cabaret/dinner functions will be held. A wide range of hotel accommodation is within walking distance of Trinity College or on public transport routes. Very reasonable accommodation will also be available on the College site. June is one of the warmest months of the year in this beautiful unspoilt country. Don't forget to try the Guinness stout when you get to Dublin.

A Dry Comment

Xerostomia due to salivary changes can represent a spectrum ranging from absolute shutdown of saliva production to normal output of saliva with changes in quality. The condition is commonly associated with alterations in salivary gland function through a diminution of saliva flow or through changes in the composition of saliva. Dry mouth is listed as a side effect of more than 200 frequently used drugs, including antihypertensives, antidepressants, anorexiant, antihistamines, antipsychotics, antispasmodics, decongestants, diuretics, and tranquilizers. Radiation therapy to the head and neck, and bone marrow transplants are among other causes of dry mouth.

"SCIENCE UNDER THE MICROSCOPE"

The history of man's understanding has been a steady progression away from mystery and magic. Science has now become highly specialized and fragmented. Many see a sharp division between the biological, physical and chemical sciences. In dentistry we should aim to build bridges between the various scientific disciplines.

The English microscopist Robert Hook coined the term "cell" to describe the exceedingly small bodies he observed while examining plants. Matthias Schwann first established the concept of the cell as a basic unit of all living matter in 1839. Rudolf Virchow is regarded as the greatest pathologist of all time born in Pomerania in 1821. Virchow emphasized the important part played by the individual cell. He wrote "There is no life but through direct succession" this led to the idea of renewal of cells within the body.

John Hunter(1728-1793) the cabinet maker who studied and became an anatomist and was appointed surgeon-extraordinary to King George III was an active researcher and philosopher. Hunter once said to his distinguished pupil, Edward Jenner, the discoverer of vaccination "But why think? why not try the experiment? However, when we think of the diversity of modern science we should spare a thought for Robert Hook born in 1635 in the Isle of White UK. Hook was an astronomer, mathematician, biologist, instrument maker, architect and materials scientist. The man who introduced the word "cell" into the language of biology on being reminded of the monastic variety while examining a slice of cork under the microscope. Galileo has been referred to as the first materials scientist(1564-1642). He found that a rod of copper suspended vertically would have a length of about 14,400 feet before breaking in tension under its own weight.

However, the real foundation of materials science came with Robert Hooks discovery in 1660 that stress is proportional to strain for materials within the elastic limit. It is interesting how todays highly specialized science has become so fragmented in the minds of many. Yet the mind that observed and coined the name "cell" for biology also created the science of materials. Robert Hook's work

reminds us that we have but one science. The science of men like John Hunter(1793) who said "But why think? why not try the experiment? Perhaps we can even give credit to Robert Hook for laying the true foundations for "Biomaterials Science" since he created the Science of Materials and also gave the term cell to biology.

ADVICE FOR BRIAN

The Prime Ministers University Committee of the National Advisory Board on Science and Technology (NABST) has recommended to Brian Mulroney that the base funds of the three federal research councils be doubled in the next three years. In addition it has also stated that the base funds should be indexed at 1.5 times the growth in the GNP for the next five years.

The government matching fund scheme has been seen by many university scientists as a way of limiting government funding to the granting councils. The new recommendations is that the matching grant scheme should be an add-on to the suggested increase base funding. The report also strongly emphasizes the importance of basic research.

If this recommendation is accepted by the Prime Minister it will be good news for the Medical Research Council (MRC) which has less chance of attracting industrial funding than the Natural Sciences and Engineering Research Council (NSERC). The increase suggested would put the MRC funding in the region of \$340 million per year by 1991. This news comes at a good time for our Faculty with its increased research activity and a solid commitment for future increased growth in scholarly activities. One of the more controversial sections of the NABST report is the call for a substantial shift of research from federal laboratories to the universities. The reason put forward was that the university system provides a truly national research grouping with regional coverage.

Like John Hunter(1728-1793), Brian Mulroney is another "Cabinet Maker" who is out to promote science.

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SYNDROMOLOGY

Research takes many forms in our dental Faculty. For some it is laboratory research for others it is educational or clinical research. Mike Cohen who has a cross appointment in Pediatrics is unique in our faculty as an international authority on medical genetics and syndromology. Few of us get to have our names recorded for posterity in the scientific literature associated with a special finding or discovery. However, this is the case with Mike Cohen who in 1973 first reported on what is now known as the "Cohen syndrome". In 1978, four additional cases were reported by Carey and Hall which provided confirmation of the "Cohen syndrome".

Mike is involved in a major task at the moment producing the third edition of an encyclopedic book "Syndromes of the Head and Neck. The book is being written in conjunction with Bob Gorlin Regent' Professor and chairman Dept. Oral Pathology School of Dentistry and Professor of Pediatrics, Obstetrics and Gynecology, Otolaryngology, and Dermatology, School of Medicine, University of Minnesota. The book will be 1600-1800 pages in print. The book, three years in preparation covers some 3,500 typewritten pages and will be published by Oxford University Press.

Mike's book on Craniosynostosis published in 1986 has received rave reviews in the scientific press. Some quotes from reviews are as follows: "The historical account alone is a work of art; the author has spared no detail in covering the history of the study of craniosynostosis"; and another, "No aspect of craniosynostosis has been left unexamined and Cohen has covered much of the subject better than anyone has previously"; or "I know of no book that includes such an amount of information within 600 pages". Even the review in the prestigious and conservative Lancet said "On many aspects of these conditions this is certainly the most helpful book I have seen".

As was pointed out earlier research in our Dental Faculty takes many forms, in the case of Mike Cohen it is Clinical Genetics.

Elliott Sutow would give a NICKEL to anyone if they could ION out his analysis equipment problems. Oskar Sykora and Doug Schaller have been trying to create a good image and Jack Gerrow and Danny MacIntosh are aiming to create a good impression, while Doug Chaytor as he plays the field is concerned about a negative image. Richard Price will be trying to ARTICULATE his research results to colleagues in Montreal. Some have said that Ros Harrison's research is kids stuff, while John Sterrett is really trying to get to the root of the problem. It has been noticed that Ken Zakariasen and Larry Peacocke have been LASING around but they are aiming to get on the right wavelength. Barry Pass likes to get his teeth into research and enjoys memories of radiation of years gone by. The story is that Dave Precious feels the urge of research in his bones. Some say that Peter Pronych lives in the past and his research career is just history. John Eisner is of COURSE BUILDING his research career. Barbara Harsanyi is said to keep her research data in a pouch, while Robin Howell has found that his tumours are regressing. Gorman Doyle believes his research has been one of the crowning achievements of his career to date. Mike Cohen believes that the real "Cohen Syndrome" is the saying of Professor White of Chemistry "...the most successful academics are passionate about what they do". Following several grant applications some are wondering if Derek Jones is becoming a compulsive gambler. Although some like it not, Joe Murphy and Bill MacInnis are trying to develop a better attitude. John Lovas is following the trend and trying to CELL research to his colleagues, while Chris Hawkins is trying to bridge the gap between aesthetics and periodontics. Amin Rizkalla found that research was not as tough as expected. At the same time Bruce Graham is feeling the STRAIN of COMPLIANCE with the soft polymers. Trevor Chin Quee has just returned from the far-east perhaps he is more ORIENTED to research than before? Al Swanzey is forming a research BOND with Jack Gerrow. According to the Kodak Company Bob Brygider has an eye on research. Vern Shaffner has been reflecting recently on his colourful research career. Finally in the case of Dental Hygiene, Nancy Prowse, Terry Mitchell and Marny Forgay are bristling with ideas and have asked Floss to join them to help clean up their act in order to improve the "Oral Health Outcomes of a Dental Health Programme".

"Who knows most, doubts most"

Robert Browning.
