

FACULTY OF DENTISTRY 2013 ANNUAL REPORT

INTRODUCTION

The Faculty of Dentistry of McGill University is a small Faculty but one which is very active in all three areas of the University's Mission. In terms of full-time equivalents (FTEs), during 2013, the Faculty had 19.5 tenured/tenure-track academic staff, 10.3 Contract Academic Staff working 1 day per week or more (see appended document "Dentistry academic staff numbers (December 2013)"), 43.5 FTE non-academic staff, plus another approximately 150 CAS Faculty Lecturers working less than 0.5 days per week as supervisors in the undergraduate and residency teaching clinics and preclinical simulation laboratory. In 2013, we had 142 undergraduate dental students, 31 clinical residents and fellows, 75 research graduate students and 8 postdoctoral research fellows. In 2013, the Faculty was using approximately 11,500 net sq. ft. teaching space, 5,500 net sq. ft. research laboratory space, and 21,500 net sq. ft. office space.

The Faculty's teaching programs include an undergraduate DMD and pre-Dent program (although students for this program are registered in the Faculty of Science), and the following graduate programs: Thesis MSc in Dental Sciences; Non-thesis MSc in Dental Sciences; PhD in Craniofacial Health Sciences; Certificate in General Practice Residency (GPR); and Certificate in Oral and Maxillofacial Surgery (OMFS). The Faculty also has a Continuing Education program recognized and accredited (for credits) by Canadian and American dental professional licensing bodies.

The Faculty's research programs are concentrated in the following four fields, with each having a critical mass of researchers and proven research excellence: i) Pain and the Neurosciences; ii) Mineralized Tissues and Extracellular Matrix Biology; iii) Biomaterials, Nano-biotechnology and Tissue Engineering; and iv) Clinical & Health Services Research.

The Faculty's service to the community is fulfilled through a variety of services that combine in particular teaching with service and, from time-to-time, research is added to these programs: i) Mobile Dentistry Outreach Program; ii) Community Health Education and Promotion Program; iii) Pediatric Dental Clinic; iv) Summer Clinic; v) Jim Lund Clinic at Welcome Hall Mission; vi) the Main Undergraduate (DMD) Dental Clinic at the Montreal General Hospital; and vii) The GPR and OMFS Program Clinics.

In evaluating the work of the Faculty, we would say that although our size limits the fields in which we can work and the extent to which we can work in those areas, we perform very strongly in all the above-mentioned research, teaching and community out-reach programs (see below and appended documents for details). Taking a critical look at the work of the Faculty however, and incorporating the observations of the cyclical academic review the Faculty underwent during 2013, there are some areas where we need to improve: i) the cohesiveness of the professional clinical training, biomedical research and applied research sections of the Faculty; ii) faculty development; iii) using a clinical epidemiologist to help link clinicians and researchers, particularly in the OMFS program; iv) increase the numbers of

clinical CAS; v) creating more structure in our graduate programs; vi) better documentation of research outputs for benchmarking purposes; and vii) greater presence of Dean in clinic.

Finally, it is important to note that the Faculty is highly integrated with the work of the University and collaborates strongly with a number of other units. Probably as a result of the small size of the Faculty, staff performing work requiring a team approach have to look beyond Faculty colleagues to other academic units in other Faculties at McGill. Indeed, this necessity has subsequently become a strong part of the way the Faculty works and has brought considerable success in a variety of elements of the work we do, e.g. the Alan Edwards Centre for Research on Pain, the Centre for Bone and Periodontal Research, and completely integrated DMD and MD student training during the first 16 months of their programs.

RESEARCH & PUBLICATIONS

In terms of research, compared to our Canadian peer institutions, according to the data we have available (at present there is no formal data collection and institutional comparison process for dental schools either in Canada or internationally), we can claim to have the highest per capita rates of research operating funding, salary support awards, CFI and other infrastructure awards and the highest numbers of research graduate students on both a per-tenured/tenure-track professor basis and also in many cases in terms of absolute numbers. The latter comparison on the basis of absolute numbers is remarkable given that we are one of the smallest dental faculties in Canada and certainly smaller than our main competitors in research.

The clear research highlight of 2013 was the successful award of a Canada Excellence Research Chair to Dr. Luda Diatchenko, jointly appointed to the Faculties of Dentistry and Medicine. This was the culmination of several years' work and is a remarkable achievement.

Beyond this CERC award, the Faculty's researchers continued to perform well in terms of the normal indicators. Data concerning peer-reviewed publications and abstracts, research operating grants and CFI awards are available in appended documents ("2013 Dentistry publications" and "2013 Dentistry abstracts"; and "2013 Dentistry research data"). The highlights are as follows:

- Among our 19.5 FTE (25 individual professors) tenure-track/tenured professors, we have the following salary support awards:
 - 3 Tier 1 CRCs
 - 4 Tier 2 CRCs
 - 1 CIHR/Industry salary award
 - 1 CIHR New Investigator award
 - 7 FRSQ chercheur-boursier awards
 - 1 James McGill and 1 William Dawson awards
- These 25 (19.5 FTE) professors published 148 peer-reviewed journal articles and 157 peer-reviewed conference abstracts in 2013.

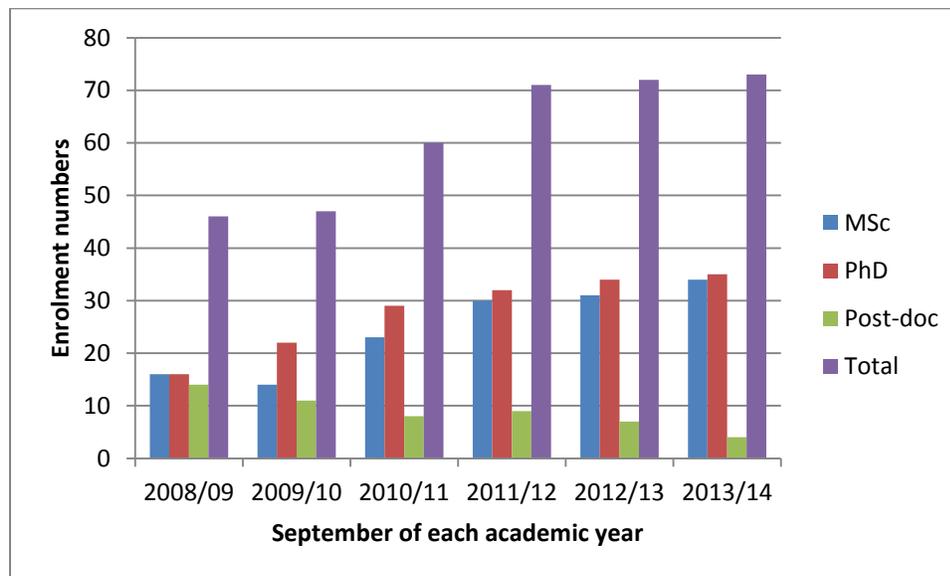
In addition, the following significant presentations were made by members of the Faculty:

- **Christophe Bedos**
 - *keynote speaker*. “Listening to Each Other”: A Project to Improve Relationships with Underserved Members of the Society. Universidad Autonoma de México. Congres Nacionale Internacional de Salud Publica Bucal. Ciudad de Mexico, Février 2013.
- **Fernando Cervero**
 - Invited keynote speaker at the 5th annual meeting of the *Study In Multidisciplinary PAin Research group (SIMPARG)*, Pavia (Italy)
 - Invited keynote speaker at the annual meeting of the *Scottish Pain Research Community (SPaRC)*, Dundee (Scotland, UK)
 - Invited State-of-the-Art lecture at the *1st World Congress on Abdominal and Pelvic Pain*. Amsterdam (The Netherlands).
- **Luda Diatchenko**
 - American Pain Society Annual Meeting. Symposium Moderator: “From receptors to pain: the molecular dynamics of pain.” New Orleans, LA.
 - 2013 Conference on "Pain, Addiction and the Law: Update 2013". Invited Presentation: "Elucidation of μ -Opioid Gene Structures: How Genetics Can Help Predict Responses to Opioids." Chapel Hill, NC.
- **Mary Ellen Macdonald**
 - (April 2013). *Understanding parental bereavement: A socio-moral examination*. Johns Hopkins Berhman Institute, Sheila Hutzler Rives Memorial Lecture. Baltimore, MD.
- **Marc McKee**
 - Amer. Soc. for Bone and Mineral Research Annual Mtg., *Translational Meet-the-Professor: X-linked Hypophosphatemia* (with Tom Carpenter). Baltimore, MD, USA. October.
- **Belinda Nicolau**
 - Nicolau B. HeNCE Life Study: An overview. Oral presentation, “Associações entre doenças crônicas: orais e sistêmicas: importância da evidência”, Secretary of Health, Cianorte, PR, Brazil, December, 2013.
- **Laura Stone**
 - **Special Lecture** - Intervertebral Discs, Neuroplasticity and Low Back Pain: Pre-Clinical and Clinical Perspectives”, The 28th Annual Research Meeting of the Japanese Orthopaedic Association, Chiba-city, Japan, Oct. 2013.
- **Maryam Tabrizian**
 - Les Entretiens Jacques Cartier, Edition 2013, “Microsystèmes pour le Monitoring Non-invasive et Quantitative de la Fonctionnalité des Ilots Pancréatiques Humains”, Novembre 24-16, 2013, Lyon, France.
 - Keynote: 4th International Symposium on Surface and Interface of Biomaterials, “Microfluidic Lab on-a-Chip devices for high throughput rare cell sorting”, -Rome, September 24-28, 2013

TEACHING & LEARNING

Our professional programs (DMD, GPR and OMFS programs) remain stable in terms of enrolment numbers. In coming years, there will be an increase in enrolment in the DMD program by approximately 5 students per year, bringing the DMD program total enrolment to approximately 160 in the coming 2-3 years. Our OMFS program is undergoing change and saw the development of an OMFS/MD program whereby OMFS residents enrol in the clerkship training years of the MD program so finishing their program with an MD degree as well as their previous DMD. During 2013, the first OMFS resident was admitted to this program. During 2013, the DMD and OMFS programs both had accreditation visits and emerged with excellent reports. Finally the GPR program remained stable in 2013, although in the 2014-15 there will be significant revisions related to the changes in the organisation of the MUHC.

Data for graduate student enrolment are shown in the figure below. This program continues to show a steady increase in numbers of graduate students.



In addition, there were a number of activities initiated to explore how the graduate program can be better structured and organised. These included a reflection on the research-related Division structure of the Faculty (tenured/tenure-track professors are mainly in the Divisions of Biomedical Sciences or Oral Health & Society), an exploration of how graduate and DMD students could better interact, and the development of improved websites both for applicants to the graduate program (<http://www.mcgill.ca/dentistry/prospective/graduateprograms>) and for those already enrolled (<http://www.mcgill.ca/dentistryohs/>). In addition, a number of new activities have been created for graduate students.

INVOLVEMENT IN THE COMMUNITY

The community outreach activities outlined in the introductory section are excellent testament to the service we provide to particularly various under-privileged communities in Montreal. These out-reach activities are set up to integrate teaching and learning opportunities for trainees at different levels, with dental services for various under-privileged groups throughout the city. Furthermore, the fact that the

majority of these programs are paid through charitable support only also speaks strongly to the Faculty's capacity to fund-raise for these services and to maintain this level of support over a number of years. Comparing our community services with other dental schools across Canada is difficult given the lack of data on the various programs, but we have every reason to believe that we are among the leaders in this field, given that we regularly have visits from other schools to learn about our work and that the aforementioned accreditation processes have complimented our community activities.

Details of the Faculty's outreach activities can be found in the appended document ("dentistry community outreach report 2012-13"). 2012-13 highlights include:

- As part of our mobile dental clinic, we had 22 evening clinics at 12 community sites, plus at the MGH (where we see patients for more complex care). We saw 375 patients, providing \$84,270 worth of free dental care;
- At the Jim Lund Clinic at Welcome Hall Mission, we saw 537 patients (including 2,396 patient visits) and provided \$381,340 worth of free dental care;
- At the refugee and immigrant clinic at the Montreal Children's Hospital, our students saw 560 patients and provided \$44,031 worth of free dental care to young children who are not covered by RAMQ, and who fall through the net supposedly provided by provincial and federal government programs; and
- At our "Summer Clinic" program during the month of July, for people with handicaps and those with other problems accessing care, we saw 881 patients, including 1988 patient visits, and provided \$361,531 worth of free dental care.

MILESTONES

During 2013, the Faculty saw the following significant milestones:

- The Faculty and University identified a suitable site for the new clinical, preclinical, administrative and dry laboratory research facilities of the Faculty, at 2001 McGill College. The University entered a 20-year lease agreement for the space, and agreed costs to renovate the space. All of this was approved by the Board of Governors and work at the new site was initiated;
- The Faculty collaborated with the Faculty of Medicine and the University to persuade Dr. Luda Diatchenko to come to McGill and lead the University's pain genetics program. She was put forward as the University's candidate for the CERC program and was awarded a chair.
- In terms of fund-raising the Faculty has made major improvements during the 2014 financial year.
 - Total revenues were \$1,779,793.
 - Annual Fund saw a 58% increase over last year
 - Major Gifts saw a 35% increase over last year
 - We have a 54% increase in donor numbers over last year
 - Dentistry has the highest average annual gift of \$1,103 among all faculties and departments (overall University average annual gift is \$366).

HONOURS, AWARDS & PRIZES

The following awards were received in 2013 by members of the Faculty:

- **Gary Bennett**
 - *The Bonica Award*, Eastern Pain Society, New York, New York, Dec. 2013
- **John Blomfield**
 - Life Membership Award 2013: The International College of Dentists, The International College of Prosthodontists and The American College of Dentists
- **Fernando Cervero**
 - President, International Association for the Study of Pain (IASP)
 - *Honorary Professor*, Universidad del Rosario, Bogota (Colombia)
- **Marie Dagenais**
 - Association of Canadian Faculties of Dentistry 2013 Distinguished Service Award. The Award of Distinguished Service recognizes individual lifetime achievement in dental education and is not given annually.
- **Luda Diatchenko**
 - Canadian Excellence Research Chair (CERC) in Human Pain Genetics
- **Dieter Reinhardt**
 - 2013, Canada Research Chair for Cell-Matrix Biology, Tier I (\$1,400,000 total)
 - 2013, Recognition by Global Medical Discovery for Hummitzsch et al., PLoS One (2013) 8:e55578
- **Petra Schweinhardt**
 - Canada Research Chair Tier II “The Neurobiology of Chronic Pain”